NOTES ON THE VASCULAR PLANTS OF THE MACKENZIE MOUNTAIN BARRENS AND SURROUNDING AREA

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AND

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ILLUSTRATED BY

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CHECKLIST OF VASCULAR PLANTS FOR MACKENZIE MOUNTAIN BARRENS AND ADJACENT AREAS

OPHIOGLOSSACEAE (Adder's Tongue Family) 8
- *Botrychium lunaria* (Moonwort)

POLYPODIACEAE (Fern Family) 8
- *Woodsia glabella* (Smooth Woodsia)

EQUISETACEAE (Horsetail Family) 8
- *Equisetum arvense* (Common Horsetail, Field Horsetail)
- *E. scirpoides* (Dwarf Horsetail)
- *E. sylvaticum* (Wood Horsetail)

LYCOPODIACEAE (Club Moss Family) 9
- *Lycopodium alpinum* (Alpine Club Moss)
- *L. annotinum* (Bristly Club Moss)
- *L. selago* (Mountain Club Moss)

PINACEAE (Pine) 10
- *Juniperus communis* (Common Mountain Juniper, Ground Juniper)
- *Picea glauca* (White Spruce)
- *P. mariana*

SCHEUCHZERIACEAE (Arrowgrass Family) 11
- *Triglochin maritimum* (Arrowgrass)

GRAMINEAE (Grass Family) 12
- *Agropyron violaceum* (Wheatgrass)
- *Alopecurus alpinus* (Foxtail)
- *Arctagrostis arundinacea* (Polar Grass)
- *Calamagrostis purpurascens* (Reed Bentgrass)
- *Deschampsia brevifolia* (Hairgrass)
- *Elymus innovatus* (Wild Rye or Lyme Grass)
- *Festuca altaica* (Fescue Grass)
- *Hierochloe brevifolia* (Holy Grass)
- *Kobresia simpliciuscula*
- *Poa alpigena* (Bluegrass)
- *P. alpina* (Bluegrass)
- *P. arctica* (Bluegrass)
- *P. paucispicula* (Bluegrass)
- *P. porsildii* (Bluegrass)
- *Trisetum spicatum*

CYPERACEAE (Sedge Family) 13
- *Carex aquatilis* (Water Sedge)
- *C. atrosquama*
- *C. aurea* (Golden Sedge)
- *C. capillaris*
- *C. capitata*
- *C. concinna*
- *C. lachenalii*
- *C. leptalea*
- *C. lugens*
- *C. membranacea*
- *C. petricosa*
- *C. physocarpa*
- *C. podocarpa*
- *C. scirpoidea*

C. vaginata
Eriophorum angustifolium (Cotton Grass)
E. vaginatum
Kobresia simpliciuscula
Scirpus caespitosus (Bulrush)
JUNCACEAE (Rush Family) 15
Juncus albescens (Bog Rush)
J. balticus (Wire Rush)
J. castaneus
J. drummondii
Luzula parviflora (Wood Rush)
L. spicata
LILIACEAE (Lily Family) 15
Lloydia serotina (Alp Lily)
Tofieldia coccinea (False Aspodel)
T. pusilla
Veratrum eschscholtzii (False Hellebore, Indian Poke)*
Zygadenus elegans (Death Camass, Wand Lily, White Camass)
ORCHIDACEAE (Orchid Family) 18
Cypripedium passerinum (Northern or Franklin's Lady's Slipper)
Habenaria hyperborea (Northern Green Orchid)
H. obtusata (Small Northern Bog Orchid, One-leaf Rein Orchid)
SALICACEAE (Willow Family) 19
Populus balsamifera (Balsam Poplar, Black Cottonwood)
Salix alaxensis (Felty-leafed Willow, Alaskan Willow)
S. arbusculoides
S. arctica
S. barclayi
S. barrattiana (Barratt's Willow)
S. glauca (Blue-green Willow)
S. lanata
S. myrtillifolia
S. phlebophylla (Skeleton Willow)
S. planifolia ssp. *planifolia* (Winter Candle)
S. pulchra
S. reticulata (Netted Willow, Dwarf Willow, Bog Birch, Dwarf Birch)
S. richardsonii
BETULACEAE (Birch Family) 21
Betula glandulosa (Ground Birch, Bog Birch, Dwarf Birch)
SANTALACEAE (Sandalwood Family) 22
Geocaulon lividum (Northern Comandra, Bastard Toadflax, Tinderberry)*

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* indicates species illustrated in text

POLYGONACEAE (Buckwheat Family) 22
- *Oxyria digyna* (Alpine Sorrel, Scurvy Grass, Round-leaved Sorrel, Mountain Sorrel, Sour Grass, Small Dock)*
- *Polygonum viviparum* (Alpine Bistort, Viviparous Knotweed)*
- *Rumex arcticus* (Arctic Dock, Sour Dock, Narrow-leaved Dock)*

PORTULACACEAE (Purslane Family) 27
- *Claytonia tuberosa* (Tuberous Spring Beauty, Potato Plant, Claytonia)

CARYOPHYLLACEAE (Pink Family) 29
- *Cerastium beeringianum* (Mouse-eared Chickweed, Alpine Chickweed, Beering Chickweed)
- *Melandrium affine* (Bladder Campion)
- *M. apetalum* (Bladder Campion, Nodding Lychnis)
- *Minuartia biflora* (Sandwort, Alpine Sandwort)
- *M. rossii* (Ross Sandwort)
- *Silene acaulis* (Cushion Pink, Moss Campion, Moss Pink)*
- *Stellaria monantha* (Chickweed)

RANUNCULACEAE (Crowfoot, Buttercup Family) 30
- *Aconitum delphinifolium* (Monkshood, Delphinium-leaved Aconite)*
- *Anemone narcissiflora* (Wild Narcissus, Narcissus-flowered Anemone)
- *A. parviflora* (Windflower, Northern or Small-flowered Anemone)*
- *A. richardsonii* (Yellow Anemone, Richardson's Anemone)
- *Delphinium glaucum* (Glaucous Larkspur)*
- *Ranunculus aquatilis* (White Water-buttercup)
- *R. eschscholtzii* (Eschscholtz's Buttercup, Subalpine Buttercup)*
- *R. hyperboreus* (Arctic Buttercup)
- *R. lapponicus* (Lapland Buttercup)
- *R. nivalis* (Snow Buttercup)
- *R. pygmaeus* (Dwarf Buttercup)
- *R. sulphureus*
- *Thalictrum alpinum* (Arctic Meadow-rue)

PAPAVERACEAE (Poppy Family) 37
- *Papaver keelei*

FUMARIACEAE (Earth Smoke Family) 39
- *Corydalis pauciflora* (Few-flowered Corydalis)*

CRUCIFERAE (Mustard Family) 39
- *Barbarea orthoceras* (Winter Cress, Yellow Rocket)
- *Cardamine digitata* (Bitter Cress)
- *C. pratensis* (Meadow Bitter Cress, Cuckoo Flower)*
- *Descurainia richardsonii* (Gray Tansy Mustard)
- *Draba glabella* (Whitlow grass)
- *D. longipes*
- *D. ogilviensis*

D. palanderiana
D. stenoloba
Eutrema edwardsii
Lesquerella arctica (Bladder Pod)
Parrya nudicaulis (Parry's Wall Flower, Naked-stemmed Parry)*
Thlaspi arvense (Field Pennycress, Fanweed, French Weed, Stink Weed)
CRASSULACEAE (Stonecrop) 45
*Rhodiola integrifolia** (King's Crown, Stonecrop)
Rhodiola rosea
SAXIFRAGACEAE (Saxifrage Family) 45
Chrysosplenium tetrandum (Golden Saxifrage, Northern Water-carpet)*
Parnassia kotzebuei (Kotzebue Grass-of-Parnassus)
P. palustris (Northern Grass-of-Parnassus)*
Saxifraga adscendens
S. aizoides (Yellow Mountain Saxifrage)
S. bronchialis (Spotted Saxifrage, Common Saxifrage)*
S. caespitosa (Tufted Saxifrage, Tufted Alpine Saxifrage)
S. cernua (Nodding Saxifrage, Drooping Saxifrage, Bulblet Saxifrage)
S. davurica ssp. grandipetala
S. eschscholtzii (Cushion Saxifrage)
S. flagellaris (Spider Plants, Whiplash Saxifrage)
S. hieracifolia (Stiff-stemmed Saxifrage, Hawk-leaved Saxifrage, Rusty Saxifrage)
S. lyalli (Red-stemmed Saxifrage)
S. oppositifolia (Purple Saxifrage, Purple Mountain Saxifrage, French Knot Moss)
S. punctata (Brook Saxifrage, Heart-leaved Saxifrage, Cordate-leaved Saxifrage, Wild Cucumber, Salad Greens)
S. radiata
S. tricuspidata (Prickly Saxifrage, Three-toothed Saxifrage)
ROSACEAE (Rose Family) 52
Dryas drummondii (Yellow Dryas, Yellow Mountain Avens, Drummond Mountain Avens, Wood Nymph)*
D. integrifolia (Mountain Avens, Smoothleaf Dryas)
Fragaria virginiana (Common Strawberry, Scarlet Strawberry)
Geum rossii (Ross's Avens)*
Potentilla biflora (Two-flowered Cinquefoil)
P. fruticosa (Shrubby Cinquefoil, Tundra Rose)*
P. uniflora (One-flowered Cinquefoil)
Rosa acicularis (Prickly Rose, Wild Rose)*
Rubus acaulis (Dwarf or Arctic Raspberry, Dewberry)
R. arcticus (Arctic Bramble, Nagoon Berry, Wineberry)*
R. chamaemorus (Cloudberry, Bake-apple, Baked-apple Berry, Salmonberry, Malt-berry, Mars Apple, Foxberry)*

Sibbaldia procumbens (Procumbent Sibbaldia)*
LEGUMINOSAE (Pea Family) 63
Astragalus alpinus (Alpine Milk Vetch, Mountain Vetch)*
A. eucosmus (Milk Vetch)
A. umbellatus (Hairy Arctic Milk Vetch)
Hedysarum alpinum (Liquorice Root, Indian Potato, American Hedysarum, Bear Root)*
H. mackenzii (Wild Sweet Pea, Mackenzies's Hedysarum)*
Lupinus arcticus (Arctic Lupine)*
Oxytropis campestris (Northern Yellow Oxytrope, Locoweed, Crazyweed)*
O. deflexa ssp. *foliolosa*
O. deflexa ssp. *sericea*
O. jordalii
O. maydelliana (Locoweed, Crazyweed)
O. nigrescens ssp. *pygmaea* (Blackish Oxytrope, Black Oxytrope)*
O. spicata (Early Yellow Locoweed)
O. sheldonensis
EMPETRACEAE (Crowberry Family) 73
Empetrum nigrum var. *hermaphroditum* (Crowberry, Curlewberry, Black Crowberry)*
VIOLACEAE (Violet Family) 73
Viola epipsila ssp. *repens* (Northern Marsh Violet, Marsh Violet)*
ELAEAGNACEAE (Oleaster Family) 75
Shepherdia canadensis (Soapberry, Soapalallie, Canada Buffalo Berry, Russet Buffaloberry, Soopalallie)*
ONAGRACEAE (Evening Primrose Family) 78
Epilobium angustifolium (Fireweed, Rosebay Willowherb, Willow-weed, Great Willowherb, Blooming Sally)
E. latifolium (Dwarf Fireweed, Broad-leafed Willowherb, River beauty, Rock Rose, Prostrate Willowherb, Riverweed)*
UMBELLIFERAE (Parsley, Carrot Family) 79
Coelopleurum gmelinii (*Angelica Lucida*, Sea-coast Angelica, Wild Celery)*
Heracleum lanatum (Cow Parsnip, Masterwort, Sand Rhubarb, Cow Cabbage, Hercules Parsnip, Indian Celery, Indian Rhubarb)*
CORNACEAE (Dogwood Family) 84
Cornus canadensis (Bunchberry, Dwarf Cornel, Dwarf Dogwood)*
PYROLACEAE (Wintergreen Family) 86
Moneses uniflora (One-flowered Pyrola, Single Delight, Wax Flower, One-flowered Wintergreen, Shy Maiden)*
Pyrola grandiflora (Large-flowered Wintergreen, Wild Lily of the Valley)*
P. secunda ssp. *obtusata* (Nodding Wintergreen,

One-sided Pyrola, One-sided Wintergreen)
ERICACEAE (Heath Family) 86
Andromeda polifolia (Bog Rosemary, Andromeda)*
Arctostaphylos rubra (Red Bearberry, Alpine Bearberry)
A. uva-ursi (Kinnikinik, Red Bearberry, Common Bearberry, Mealberry)*
Cassiope tetragona (Arctic Bell Heather, White Mountain Heather, Arctic White Heather, Lapland Cassiope)*
Kalmia polifolia (Pale Laurel, Mountain Laurel, Swamp Laurel, Bog Laurel)
Ledum palustre ssp. *decumbens* (Narrow-leaved Labrador Tea)*
Oxycoccus microcarpus (Swamp Cranberry, Small-fruited Cranberry, Small Bog Cranberry, Small Cranberry)*
Rhododendron lapponicum (Lapland Rosebay)
Vaccinium uliginosum (Alpine Blueberry, Bog Blueberry, Bilberry, Bog Berry, Bog Huckleberry, Whortleberry, Great or Bog Bilberry)
V. vitis-idaea (Bog Cranberry, Mountain Cranberry, Lingonberry, Rock Cranberry, Low Bush Cranberry)*
PRIMULACEAE (Primrose) 100
Androsace chamaejasme (Rock Jasmine, Sweet-flowered Androsace, Grass-leaved Androsace)*
Primula egaliksensis (Greenland Primrose)
P. mistassinica (Bird's Eye Primrose, Dwarf Canadian Primrose)
P. stricta
GENTIANACEAE (Gentian Family) 100
Gentiana glauca (Glaucous Gentian, Smooth Alpine Gentian)*
G. propinqua (Arctic Gentian, Four-parted Gentian)*
G. prostrata (Moss Gentian)
Lomatogonium rotatum (Marsh Felwort, Star Gentian)
POLEMONIACEAE (Polymonium Family) 102
Polemonium acutiflorum (Tall Jacob's Ladder, Acutish Jacob's Ladder)*
P. pulcherrimum (Jacob's Ladder, Beautiful Jacob's Ladder)
BORAGINACEAE (Borage Family) 106
Mertensia paniculata (Bluebells, Chiming Bells, Tall Lungwort)*
Myosotis alpestris ssp. *asiatica* (Alpine Forget-me-not)*
SCROPHULARIACEAE (Figwort Family) ....
Castilleja sp. (Indian Paintbrush, Painted Cup)
Lagotis stelleri (Weasel-snout)
Pedicularis arctica (Arctic Lousewort)
P. capitata (Few-flowered Lousewort, Capitate Lousewort, Head-shaped Lousewort)*
P. labradorica (Labrador Lousewort)
P. lanata (Woolly Lousewort, Bumble-bee Plant)*

P. sudetica (Sudetan Lousewort, Fernweed)
Veronica
V. wormskjoldii (Alpine Speedwell)*
LENTIBULARIACEAE (Bladderwort Family) 112
Pinguicula vulgaris (Butterwort, Bog Velvet)
CAPRIFOLIACEAE (Honeysuckle Family) 112
Linnaea borealis (Twinflower)
VALERIANACEAE (Valerian Family) 114
Valeriana capitata (Wild Heliotrope, Capitate Valerian)*
V. sitchensis (Mountain Heliotrope, Wild Heliotrope, Sitka Valerian)
CAMPANULACEAE (Blueberry Family) 114
Campanula aurita (Bellflower, Harebell, Blueberry)
COMPOSITAE (Sunflower Family) 114
Achillea nigrescens (Yarrow, Millfoil)
Antennaria isolepis (Everlasting, Pussy Toes)
A. monocephala (Single-headed Cat's Paw)*
A. pulcherrima (Showy Everlasting, Pussy Toes)
Arnica alpina ssp. *angustifolia* (Alpine Arnica, Mountain Tobacco)*
Artemesia arctica (Sagebrush, Arctic Wormwood)
A. tilesii (Mugwort, Tilesium's Wormwood)*
Aster alpinus
A. sibiricus (Siberian Aster)*
Chrysanthemum integrifolium (Chrysanthemum, Daisy)
Crepis nana (Dwarf Hawk's-beard, Cushion Hawk's-beard, Alpine Hawk's-beard)
Erigeron elatus (Fleabane)
E. humilis
E. hyssopifolius
E. purpuratus
Petasites frigidus (Sweet Coltsfoot)
Saussurea angustifolia (Narrow-leaved Saussurea)*
Senecio atropurpureus (Groundsel, Arctic Senecio)*
S. cymbalaria (Mignonette-leaved Groundsel)
S. kjellmannii (Arctic Senecio)
S. lugens (Black-tipped Groundsel)
S. triangularis (Triangular-leaved Ragwort, Giant Ragwort, Brook Ragwort)*
Solidago multiradiata (Northern Goldenrod, Rocky Mountain Goldenrod)*
Taraxacum alaskanum (Dandelion)
T. dumetorum (Dandelion)

INTRODUCTION

Northwest of the Rocky Mountains lies the great arc of the Selwyn and Mackenzie Mountains of the Yukon and Northwest Territories. At the heart of these great mountain systems, where the Selwyn Mountains meet the rugged Backbone Ranges of the Mackenzies, is the undulating plain called the Mackenzie Mountain Barrens (Figs. 1 and 2). Far from barren, the plain is a summertime kaleidoscope of tundra flowers, calving caribou, and a variety of nesting and staging birds.

The plain is located just northeast of MacMillan Pass. There the watershed of the Continental Divide separates the Yukon River system, which flows to the Pacific, from the Mackenzie River system, which flows to the Arctic Ocean. Tributaries and headwaters of the Hess River, flowing west, and the Keele River, flowing east, are fed by glaciers from the surrounding mountains. The Barrens occupies about 200 square kilometers (80 square miles) of land which is from 1400 to 1700 meters in elevation (4500 to 5500 feet); the highest of the surrounding peaks, Keele Peak to the west, rises to 2333 meters (7654 feet).

The climate is characterized by short, fairly warm summers and long, cold winters. Mean daily temperatures for June, July, and August are around 9°C (48°F), although temperatures may vary from -9°C (16°F) to 27°C (49°F) during that time. Mean daily temperatures in December, January, and February are around -22°C (-8°F). Annual precipitation of 46 cm (18 in) has been recorded, with rainfall comprising 14 cm (5.5 in) and snowfall 325 cm (128

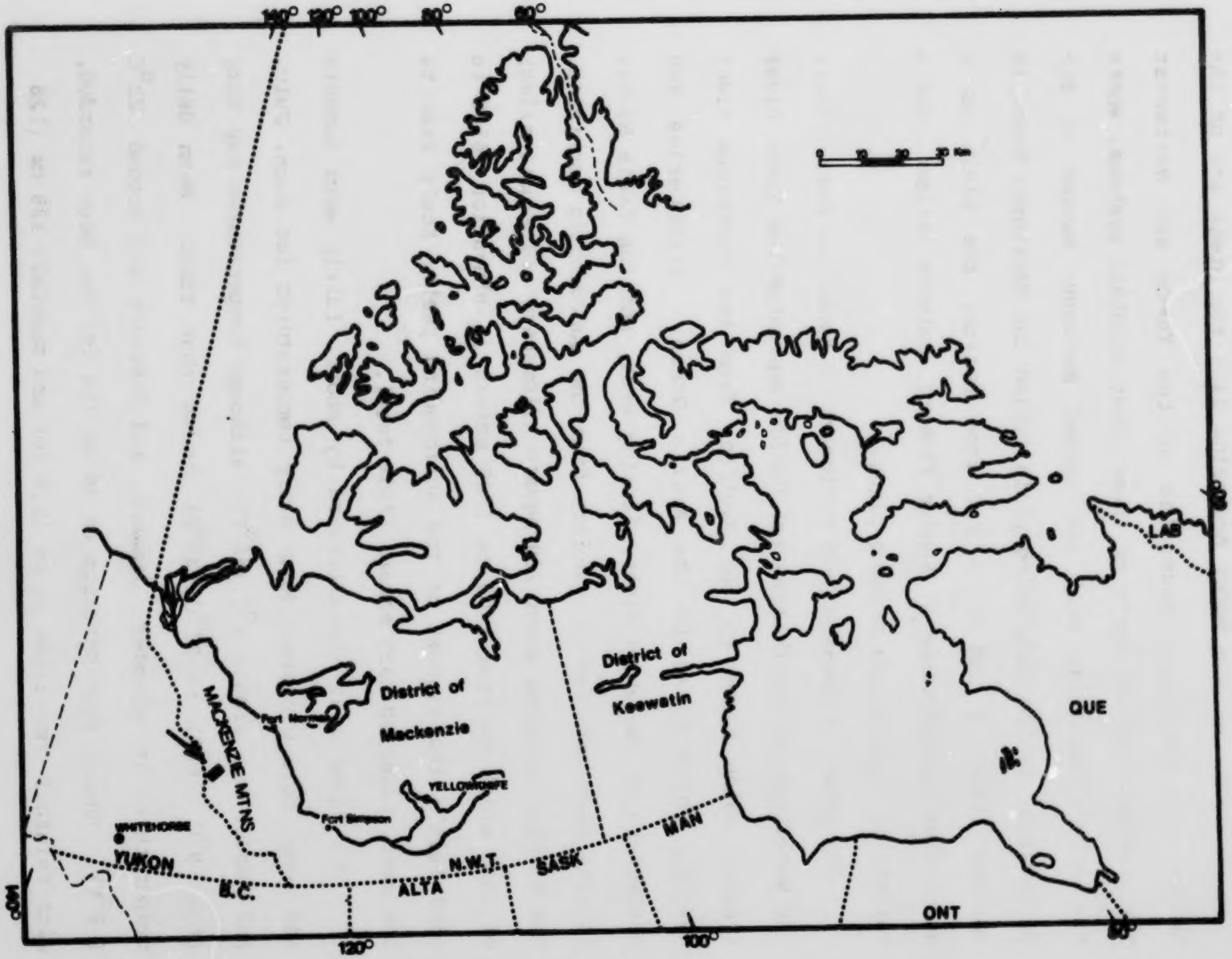

140°
120°
100°
80°
60°
60°
0 10 20 30 km
LAB
QUE
ONT
MAN
SASK
N.W.T.
ALTA
B.C.
YUKON
WHITEHORSE
MACKENZIE MTNS
Fort Norman
Fort Simpson
YELLOWKNIFE
District of Mackenzie
District of Keewatin
140°
120°
100°
80°

Figure 1. Location of the study area in the Northwest Territories, Canada

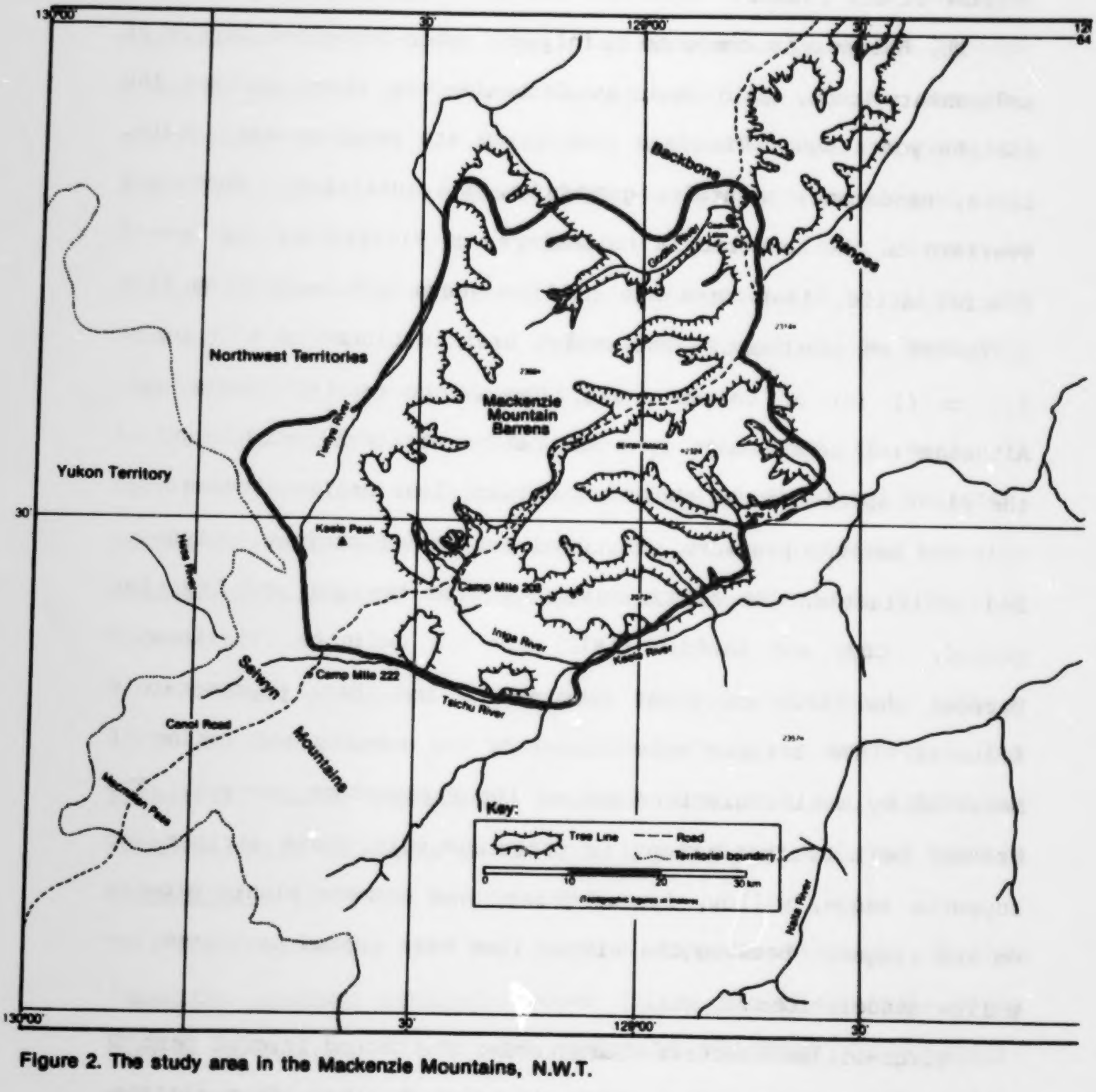

130°00'
30'
129°00'
30'
128°
64
30'
130°00'
30'
129°00'
30'
Backbone
Ranges
Godlin River
Northwest Territories
Mackenzie
Mountain
Barrens
Twitya River
Yukon Territory
Keele Peak
Hess River
Camp Mile 208
Intga River
Keele River
Camp Mile 222
Tsichu River
Selwyn
Mountains
Canol Road
Macmillan Pass
Natla River
Key:
Tree Line
Road
Territorial boundary
0
10
20
30 km
Topographic figures in meters

Figure 2. The study area in the Mackenzie Mountains, N.W.T.

in), 10 cm of snow being equal to 1 cm of rain. The general air flow pattern through the Mackenzie Mountains is from west to east (Miller et al. 1982).

The Barrens is composed mainly of water-deposited layers of sedimentary rock, laid down in Carboniferous times perhaps 250 million years ago. The main rock types are conglomerate, shale, slate, sandstone, hornfels, graywacke, and quartzite. These are overlain in the center by a thick layer of Pleistocene and Recent glacial drift, less than one million years old, extending from northwest to southeast. The entire area is blanketed with up to 2.5 cm (1 in) of volcanic ash, thought to be 1400 years old. Although the soils range from neutral to extremely acid, many of the plant species found there are calciphilous or lime-loving.

The Barrens presents an unusual pattern of stripes, polygons, and solifluction lobes, clearly seen from the air and from the ground. Cody and Sneddon (1972) see a definite relationship between the different plant communities and these physiographic features. The stripes were caused by the sorting and raking of material by moving glaciers during the Pleistocene ice-age. The greater part of the Barrens is patterned with these stripes and supports sedge, willow, fescue grass, and anemone plants growing on the ridges. Between the ridges lies bare ground or bryophyte-willow associations.

Birch-willow thickets characterize the second largest part of the Barrens, growing along with crowberry, heather, fescue grass, lichens, and brypohytes.

Frost polygons of various sizes form geometric patterns on the tundra. They are separated by cracks and crevasses caused by freezing and thawing of water-saturated soil. The polygons support the third largest type of plant community on the Barrens which is composed of lichens, sedges, heather, willow, anemone, and bryophytes found on the edges, while the drier centers are essentially bare or have grass-lichen-bryophyte associations.

A fourth major plant community found on the Barrens is located on broad drainage ways and is characterized by willow and sedges. The fifth is mixed sedge meadows and willow hummocks, with coltsfoot, cinquefoil, and bryophytes.

Solifluction, or gradual flowing of masses of soil, is exhibited in large, flat lobes and tongues of displaced material, raised slightly above the level of the surrounding terrain. *Ranunculus sulphureus* and *Eutrema edwardsii* especially like this type of habitat.

A number of plants of the Yukon Territory find their eastern limit of distribution on the Mackenzie Mountain Barrens: *Poa porsildii*, *Juncus drummondii*, *Anemone narcissiflora*, *Ranunculus eschscholtzii*, *Corydalis pauciflora*, *Lagotis stelleri*, and *Senecio triangularis* (Cody and Sneddon 1972).

The vegetation of the Barrens supports woodland caribou (*Rangifer tarandus caribou*), moose (*Alces alces*), grizzly bears (*Ursus arctos*), arctic ground squirrels (*Spermophilus parryii*), and other rodents. Preying on those species are wolves (*Canis lupus*), wolverine (*Gulo gulo*), red foxes (*Vulpes vulpes*), and weasels (*Mustela nivalis*) (Cody and Sneddon 1972).

Many bird species are known or suspected to nest on the plain, including oldsquaw ducks (Clangula hyemalis), golden plover (Pluvialis dominica), northern phalerope (Lobipes lobatus), Lapland longspur (Calcarius lapponicus), Smith's longspur (Calcarius pictus), and long-tailed jaeger (Stercorarius longicaudus). The jaeger may find the Barrens similar to its normal nesting habitat in Arctic tundra far to the north (Cody and Sneddon 1972).

The following pages contain notes on the vascular plants which have been collected from the Mackenzie Mountain Barrens and surrounding boreal forest, particularly the Godlin Lakes area. The origin of their names, their edibility or poisonous nature, and their various uses are detailed. Nearly forty references have been consulted, but doubtless there are many more.

You are invited to add to the list of plants and to the data on any of the genera or species of the area.

NOTES ON THE VASCULAR PLANTS OF THE MACKENZIE MOUNTAIN BARRENS AND SURROUNDING AREA

OPHIOGLOSSACEAE Adder's Tongue Family

(Gk. ophis: snake, and glossa: tongue).

Botrychium Moonwort

(Gk. botrus: a cluster, referring to the spore cases).

B. lunaria Moonwort

POLYPODIACEAE Fern Family

(Gk. polus: many, and pous: foot, referring to the stalks).

Woodsia

(After Joseph Woods, English biologist)

W. glabella Smooth Woodsia

EQUISETACEAE Horsetail Family

(Lat. equus: horse, and seta: bristle).

Equisetum Horsetail

The white fertile shoots of some species are edible, as is the sweet pulp which can be eaten raw.

The hollow stems are full of silicon and may be used for scouring pots and pans. Older plants can be used as sandpaper. Washoe Indians of Nevada and California used the stems to smooth bows and arrows of Yew and Arrowwood.

A decoction of Horsetail is said to be good for stopping bleeding and, when applied as a poultice, for healing wounds. Chippewa Indians of the plains bruised the stems and used them as a poultice for blood poisoning.

E. arvense Joint Grass, Common Horsetail, Horse Pipes, Mare's Tail, Snake Grass, Scouring Rush

Young shoots may be used as a potherb. Stiff, mature stems can be peeled and the pulp eaten raw.

Caribou, moose, sheep (Ovis dalli dalli), and grizzly bears eat this plant; in fact it is the main food item of grizzlies during June and July.

Shoshone Indians of California used the joints for whistles. When dried and burned its ashes were used by Indians on sore mouths.

E. scirpoides Dwarf Horsetail

E. sylvaticum Wood Horsetail

LYCOPODIACEAE Club Moss Family

Lycopodium Club Moss

(Gk. Lukus: wolf, and pous: foot, referring to the resemblance to a wolf's foot).

Club Moss may be used as dye to produce shades of cream, gold, and olive green. The spores are highly flammable and were used in making fireworks.

At least one species of Lycopodium has had several medicinal uses.

L. alpinum Alpine Club Moss

L. annotinum Bristly Club Moss

L. selago Mountain Club Moss

The species contains a poisonous alkaloid which causes pain in the mouth, vomiting, and diarrhea.

PINACEAE Pine

(Lat. *pinus*: pine)

Juniperus Juniper

Juniper berries are used to flavor gin and other cordials. They may be crushed and added to bread and onion stuffing for fowl. They have been dried, ground, and used in preparation of a mush or cake. They add an interesting flavor to tea. Juniper berries are used toasted as a coffee substitute in Sweden, to flavor sauerkraut in Germany, to make beer in France, and as a pepper substitute in England. The berries may be eaten cooked or raw, but large quantities may cause irritation to the kidneys and upset digestion.

Nez Perce Indians of California used Juniper for green dye for woven corn husk bags.

Junipers were used by British Columbia Indians as fumigants, deodorizers, and cleansers, in connection with sickness. The pungent odor of brewing or burning boughs was used to purify a house from infection and bad spirits after illness or death.

J. communis Ground Juniper, Common Mountain Juniper

The fruit of these junipers is said to be a stimulant, tonic, and diruretic. It is reputed to help digestion, dissipate flatulence, increase appetite, induce sweating, and increase mucous secretion. It has been used for inflammation of the mucous membranes and diseases of the bladder. Blackfoot Indians of Alberta and Montana used a decoction to treat venereal disease.

A decoction applied externally is said to be a tonic to reduce swelling and inflammation.

Picea Spruce

(Lat. *pix*: pitch).

Spruce is a valuable lumber and pulp tree in southern Canada. Resin, tannin, and turpentine are products of spruce bark. The roots are used in basket-making and in sewing. Spruce gum may be used on the face for sunburn protection. Spruce is a major source of firewood and temporary shelter to travelers. The cones provide food for squirrels, grouse, and ptarmigan.

Cree Indians chewed the small cones to alleviate sore throat.

P. glauca White Spruce

P. mariana Black Spruce

SCHEUCHZERIACEAE Arrowgrass Family

(After Brothers J. and J.J. Scheuchzer, early 18th century Swiss botanists).

Triglochin Arrowgrass

(Gk. *tri*: three, and *glochis*: a point, referring to the fruit of the 3-carpeled species).

T. maritimum Common Arrowgrass

This plant contains Prussic Acid, a poisonous hydroxynic acid, in all stages of growth, and has been known to poison livestock. However, it has been used as food by humans. The seeds were parched and eaten or used like coffee by Indians. Leaves were used as a salad or cooked as a potherb.

GRAMINEAE Grass Family

(Lat. gramen: grass).

Several genera of grasses found in the area provide food for Dall's sheep, grizzly bears, rodents, and birds. The dried grasses make attractive winter bouquets.

Agropyron Wheat grass

A. violaceum

Alopecurus Foxtail

A. alpinus

Arctagrostis Polar Grass

A. arundinacea

Calmagrostis Reed-Bentgrass

C. purpurascens

Deschampsia Hairgrass

D. brevifolia

Elymus Wild Rye or Lyme-Grass

E. innovatus

Festuca Fescue Grass

F. altaica

Hierochloe Holy Grass

Poa Bluegrass

(Gk. poa: grass or fodder).

The purplish flowering spikes, fresh, dried, or frozen, are used to produce assorted shades of green dye.

P. alpigena

P. alpina

P. arctica

P. paucispicula

P. porsildii Porsild's Bluegrass

(After A.E. Porsild, botanist, taxonomist, and author of floral keys on northern Canada).

Trisetum

T. spicatum

CYPERACEAE Sedge Family

(Lat. cypressus: cypress).

The brown spikes of the sedges are used to produce various shades of cream, yellow-green, green, and brown dye which prove quite colorfast.

Carex

(Lat. carex: sedge)

Roots of some Carex plants found in other areas grow several feet long. Such roots when soaked, peeled, and split into strands are fashioned into baskets. Laplanders and Indians used dried sedge leaves to stuff boots and mitts for warmth.

C. aquatilis Water Sedge

The succulent, sweet, pinkish base of the stem is eaten raw by Alaskan natives.

C. atrosquama

C. aurea Golden Sedge

C. capillaris

C. capitata

C. concinna

C. lachenalii

C. leptalea

C. lugens

C. membranacea

C. petricosa

C. physocarpa

C. podocarpa

C. scirpoidea

C. vaginata

Eriophorum Cotton-Grass

(Gk. *erion*: wool, and *phoros*: bearing, referring to the woolly heads).

E. angustifolium

E. vaginatum

Kobresia

K. simpliciuscula

Scirpus Bulrush

(Lat. *scirpus*: bulrush)

S. arctus, and probably also *S. caespitosus*, has edible shoots in spring and fall, edible seeds in fall, and edible rootstalk all year. The peeled shoots can be eaten raw or cooked. The rootstalk can be baked and the pith eaten. The dried stem and rootstalk can be pounded into flour and mixed with the seeds and used for baking. In fall the seeds can be ground into meal.

S. caespitosus

JUNCACEAE Rush Family

Juncus Bog-Rush

(Juncus is the classical name for Rush, perhaps from the Lat. *jungo* to join, as the stems can be used like twine for binding).

Juncus species which grow in other areas have stronger stems and are used for basket-making.

J. albescens

J. balticus Wire Rush

Greenish-brown dye can be made from the stems.

J. castaneus

J. drummondii

Luzula Wood Rush

(Old Italian *luzziola*: glow-worm)

L. parviflora

L. spicata

LILIACEAE Lily Family

(Gk. *illion*: the classical name for Lily).

Lloydia Alp Lily

(After Edward Lloyd, a Welsh naturalist of the 1600's).

L. serotina

Tofieldia False Asphodel

(After Thomas Tofield, an English botanist of the 1700's. Asphodel was the name of a legendary immortal plant which clothed the Elysian fields of the Roman gods).

T. coccinea

(coccinea means scarlet)

T. pusilla

Veratrum False Hellebore

(Lat. *vere*: truly, and *ater*: black, in reference to the root color).

V. eschscholtzii False Hellebore, Corn Lily, Indian Poke, Green Hellebore, American White Hellebore (After Dr. J.F. Eschscholtz, who was a college friend of Adelbert von Chamisso, a German poet and naturalist who accompanied von Chamisso on Kotzebue's scientific voyage around the world in 1815).

False Hellebore contains several poisonous alkaloids and can be lethal. Dried and powdered plants are used to make a garden insecticide, called Hellebore.

However, "The young shoots are eaten by the Yukon Indians and when cooked are very tender and palatable and apparently not poisonous, as is the plant of Southern Alberta and B.C." (Porsild 1951).

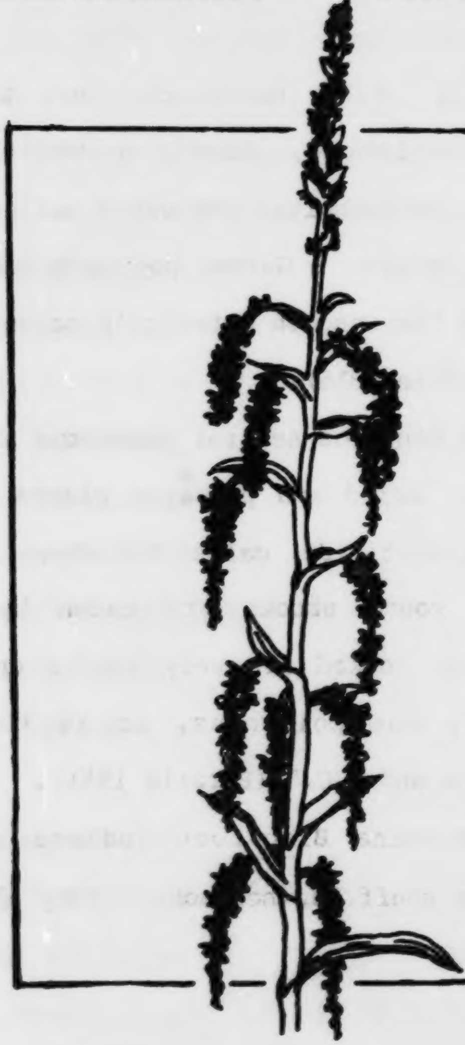
Alberta and Montana Blackfoot Indians used dried, crushed root as snuff for headache. They also used the root for suicide.

Zygadenus Zygadene

(Gk. *zugon*: a Yoke, and *aden*: a gland).

Although Zygadenus is deadly poisonous, the species *A. gramineus* has been used in a poultice to cure boils, rheumatism, and pain of strains and bruises.

Veratrum eschscholtzii **American White Hellebore**
False Hellebore



Z. elegans Death-Camass, White Camass, Wand Lily, Elegant Poison Camass, Mountain Death Camass.

This plant contains the poisonous alkaloid zygadenine in all parts and can poison sheep, cattle, and children. The creamy-white flowers are ill-smelling.

ORCHIDACEA Orchid Family

(Gk. orkhis: testicle, from the shape of the root).

Cypripedium Lady's Slipper

(Gk. Cypris: Venus or Aphrodite, and pedilon: shoe, the lip being a suitable slipper for the goddess).

C. passerinum Northern or Franklin's Lady's Slipper, Sparrow's Egg Lady Slipper. (Passerinum means sparrow's egg, the lip being about the size and shape of a sparrow's egg).

Habenaria Rein-orchis

(Lat. habena: thong, or rein of a horse, on account of the shape of the spur in some species).

H. hyperborea Northern Green Orchid

H. obtusata Small Northern Bog Orchid, One-leaf Rein-orchis, Blunt-leaved Bog Orchid.

(Obtusata refers to the blunt tip of the basal leaf).

The flowers are cross-pollinated by mosquitoes, which enter to search for the nectar stored in the spur. Upon leaving, the mosquitoes carry one or two yellow horns, sticky pollen masses, on their heads, to transport to another orchid.

SALICACEAE Willow Family

Populus Poplar

(Lat. populus: the classical name of the Poplar).

The cambium was eaten as a delicacy in spring by Slave Indians and by Flathead Indians of Montana.

Indians used poplar sap, boiled with pine resin, to dye white oak splints brown.

P. balsamifera Balsam Poplar, Black Cottonwood, Tacamahac

Poplar trees grow quickly compared to evergreens. They are used to build log homes, as fence posts, and are an important source of firewood. Young trees are used as browse by moose. Honeybees use the sticky fragrant substance from the young leaves and buds to waterproof their hives.

Poplar leaves produce tan, caramel, yellow, gold, red, green, brown, grey, and black dye.

Salix Willow

(Lat. salix: ancient name of the Willow)

Willows are used to make baskets, shelters, backrests, seedbeaters, bows, and whistles. The roots were used for sewing birch baskets and for making fish nets by the Indians who traveled in the Mackenzie Mountains. Both roots and stems are used as fuel, expecially when good coals are needed, and are especially crucial in arctic and alpine areas because of the lack of other wood. The fuzz is used as wicking for Inuit seal-oil lamps.

Alaskan Indians and Inuit use the young tender leaves and young shoots as food. The outer woolly layer on new shoots is removed, and the tender shoots eaten raw. Inuit dip them in seal oil. The inner bark called "the scrape," is used as a winter tidbit by Inuit who eat it raw with seal oil and sugar. Both shoots and young leaves are excellent sources of Vitamin C.

Willows provide streambank and watershed protection for wildlife and are also important as browse. The twigs and young branches are eaten by caribou and moose, the bark and small twigs by hares and lemmings. The buds are eaten by ptarmigan in winter. In spring and early summer, the young leaves and flowering catkins are eaten by mammals and birds. Willows provide an important food for grizzly bears and a secondary food for beavers.

All parts of the Willow may be used for dye. The catkins produce soft green, the leaves a bright yellow, the branches a soft pinkish-brown, and the roots a deep warm brown or red-brown.

Willow bark contains a bitter astringent substance called salicin. A decoction of this inner bark was used to dispel fever.

S. alaxensis

S. arbusculoides

S. arctica

S. barclayi

S. barrattiana Barrett's Willow

S. glauca Blue-green Willow

S. lanata

S. myrtillifolia

S. phlebophylla Skeleton Willow

S. planifolia spp. *planifolia* Winter Candle

S. pulchra

S. reticulata Netted Willow, Dwarf Willow, Creeping Willow

S. richardsonii

BETULACEAE Birch Family

Betula Birch

(Lat. *betula*: name of the Birch).

Birches contain much resin and are used for long-lasting fires. They add an intriguing flavor to smoked meats and fish. The bark of some species is excellent tinder for starting fires.

Birch sap has been used as an aid for rheumatism. Sap of the larger birch trees is used for wine-making and boiled down for syrup.

B. glandulosa Bog Birch, Ground Birch, Dwarf Birch

(*Glandulosa* refers to the glands on the underside of the leaves and on the twigs, which produce a sticky substance).

The buds are eaten by grouse and ptarmigan in winter. However, birch is usually unpalatable to large mammals. The summer leaves produce a clear yellow dye, and the branches a warm tan color.

SANTALACEAE Sandalwood Family

(Lat. _santalum_: sandle tree).

Geocaulon Northern Comandra

(Gk. _geo_: earth, and Lat. _caulis_: stem, referring to the underground stem).

G. lividum Northern Comandra, Timberberry, Dogberry, Bastard Toadflax.

The single red or orange, fleshy berry is edible but insipid.

POLYGONACEAE Buckwheat Family

Some people are allergic to members of the buckwheat family. The foliage and seeds are capable of causing photosensitization or hypersensitivity to light in animals and possibly humans, so the plants should not be eaten in quantity. The roots should not be eaten because they contain a harmful amount of tannic acid which is also present with oxalic acid in the leaves.

Oxyria Sorrel

(Gk. _oxus_: sour, because of the acid leaves).

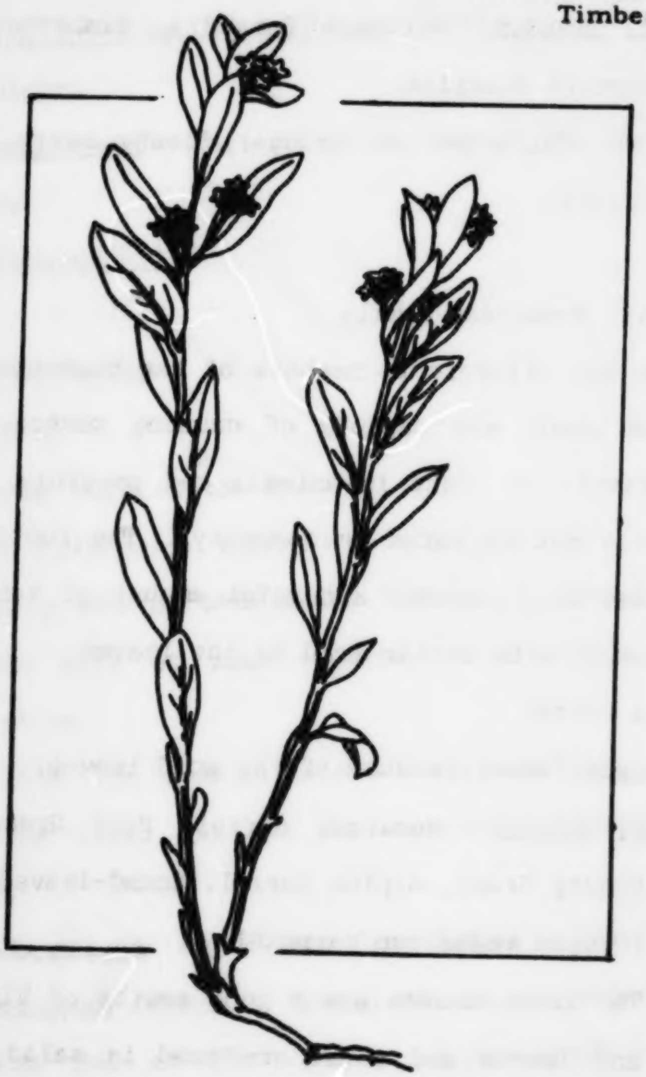
O. digyna Mountain Sorrel, Sour Grass, Small Dock, Scurvy Grass, Alpine Sorrel, Round-leaved Sorrel.

(Digyna means two carpels)

The fresh leaves are a good source of Vitamins A and C, and leaves and stems are used in salad and nibbled to quench thirst. Indians chopped them with the leaves from other plants such as watercress, and allowed them to ferment like sauerkraut. Inuit perserve the leaves.

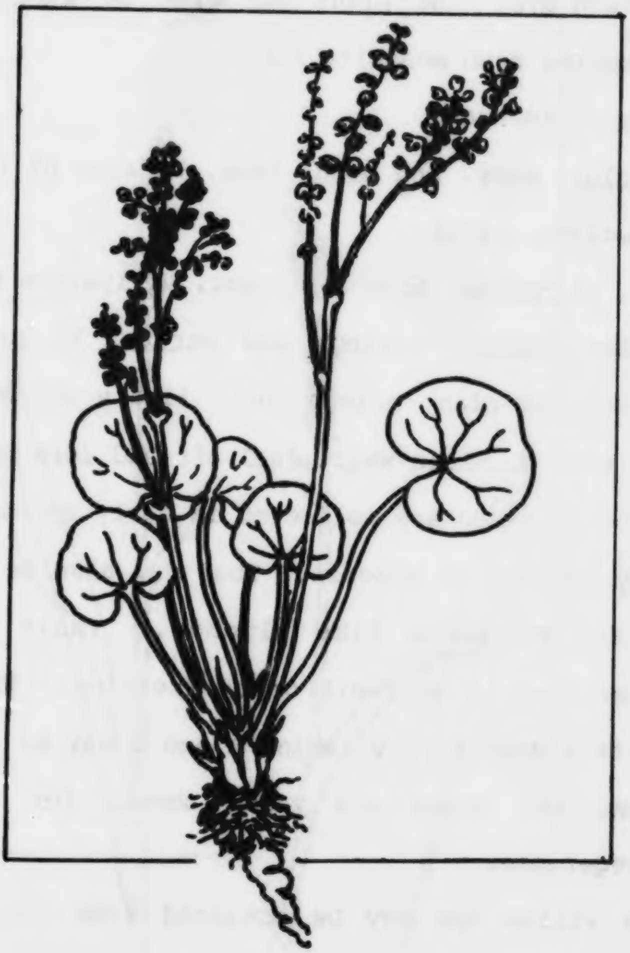
Geocaulon lividum

Northern Comandra
Timberberry



Oxyria digyna

Mountain Sorrel
Sour Grass



in seal-oil. With the exception of the roots, the plants may also be used as a potherb, cooked like spinach or added to soup as a spice or thickener.

The leaves and stems are eagerly sought by caribou, pika, and marmots. Hares and lemmings like the fleshy rhizomes. Mountain Sorrel produces a yellowish-green to green dye. The plant may also be used to reduce the itching from mosquito bites.

Polygonum Knotweed

(Gk. polus: many, and gonu: knee, because of the zigzag stem with swollen joints.

P. viviparum Alpine Bistort, Viviparous Knotweed

(Lat. vivus: living, and parere: to produce, meaning that the plant brings forth live young by means of the little bulblets which fall off and form new plants).

The rhizomes are collected in early spring and eaten raw by natives of Siberia. They may also be cooked and are said to taste like almonds. Inuit preserved the rhizomes in seal-oil or by freezing. The greens which are a source of Vitamins A and C may be used for salad, and the stems and young shoots for a cooked green vegetable.

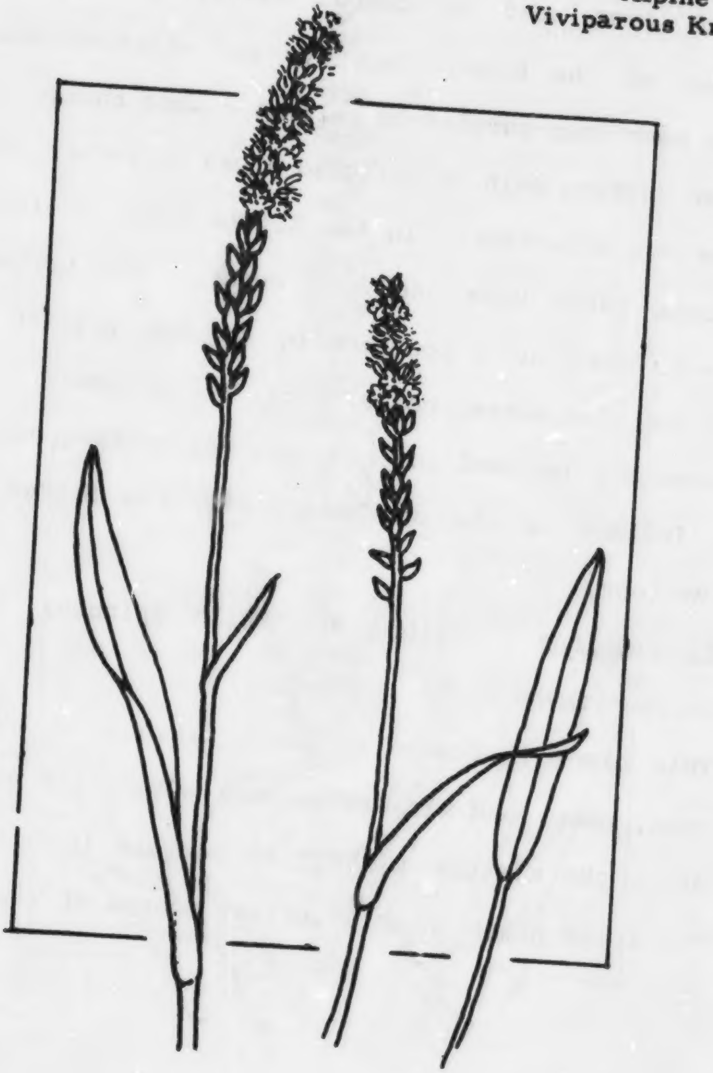
A yellow dye may be obtained from the spikes of the plants.

Rumex Dock

(Lat. Rumex: an old name for the plant, called that by Pliny, a Roman writer of the 1st century A.D.).

Polygonum viviparum

Alpine Bistort
Viviparous Knotweed



Rumex is rich in Vitamin C and iron and has been used in many ways as food and medicine. It is usually served cooked and when cooked with milk, the astringency of the leaves is removed.

Rumex has been used to combat fever, scurvy, ringworm, impurities of the blood, leprosy, and elephantiasis. The juice is sometimes gargled to relieve a sore throat and it is rubbed on itching skin or infected areas to reduce irritation and draw out infection. In the Middle Ages, poultices made from Rumex juice were used for burns. The boiled mashed roots were used as a poultice by coastal British Columbia Indians for skin sores, boils, cuts, and scrapes.

The leaves may be used to produce a yellowish-green dye, and Navajo Indians of the southwestern United States used dye from the root.

R. arcticus Arctic Dock, Wild Spinach, Sour Dock, Narrow-leaved Dock.

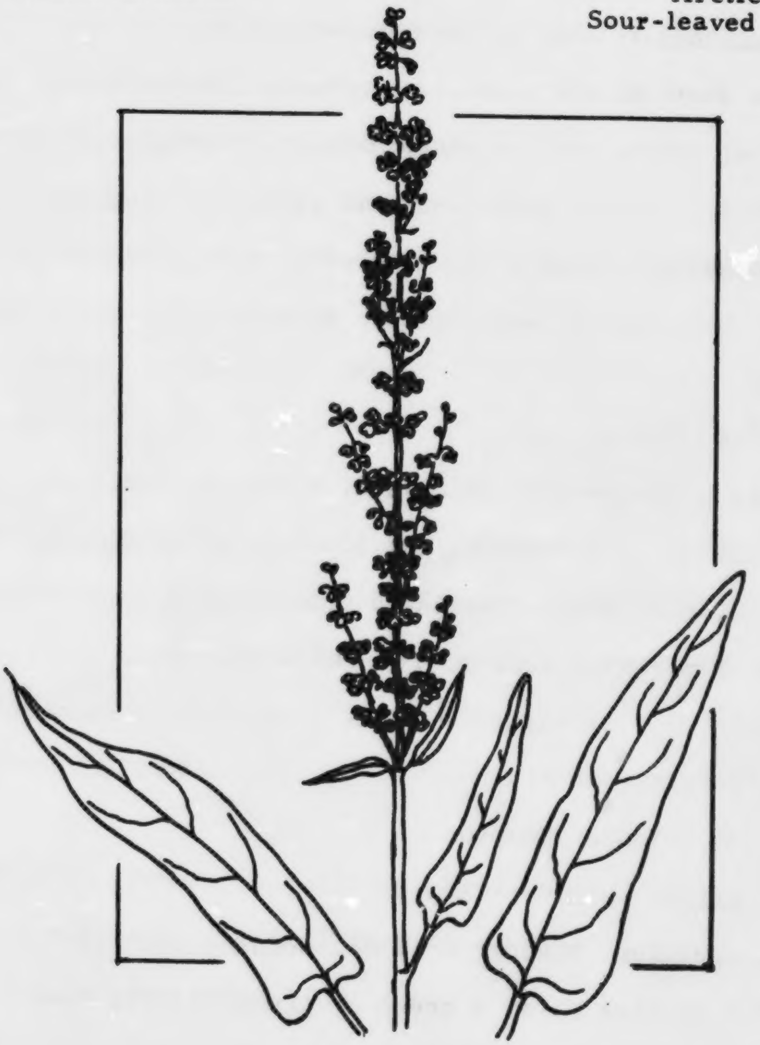
This plant is cooked or eaten fresh in salads. Inuit cook, chop, and mix Arctic dock with other greens, then store the mixture in kegs or barrels in a cold place. The fresh plant is an excellent source of Vitamins A and C.

PORTULACACEAE Purslane Family

(Lat. Portulaca: a name, derived from Pliny's writings, from Lat. porto: to bear, and lac: sap, the leaves being turgid and thickened with cell-sap).

Rumex arcticus

Arctic Dock
Sour-leaved Dock



Claytonia

(After Dr. John Clayton, a Virginia botanist who furnished Gronovius with materials for his Flora Virginica in the 1700's).

C. tuberosa Spring Beauty

(Tuberosa refers to the corm or tuber).

The base of the stem is thickened into a large edible corm, which may be eaten boiled, roasted, or added to stews. Inuit preserved the corms in seal oil. The greens and flowers are a good source of Vitamins A and C. They may be eaten raw or cooked.

CARYOPHYLLACEAE Pink Family

Certastium Mouse-eared Chickweed, Powder Horn

(Gk. keras: a horn, meaning the long curved capsule).

C. beeringianum Mouse-eared Chickweed, Alpine Chickweed

(Mouse-eared Chickweed refers to the upper part of the leaf which resembles a mouse's ear and is covered with long silky hairs).

Melandrium Bladder Campion

M. affine Bladder Campion

M. apetalum Bladder Campion, Nodding Lychnis

This species makes a green or cream-colored dye.

Minuartia Sandwort

Indians used the roots of some species as eye-wash and tea. Another type was used as leaves in native tobacco.

M. biflora Sandwort, Alpine Sandwort

M. rossii Ross Sandwort

Silene Campion

(Gk. sialon: saliva, since stems and other parts are sticky).

S. acaulis Moss Campion, Moss Pink, Cushion Pink

(Lat. a: without, and caulis: stalk, because the flowers are apparently stemless).

At night the plants are scented to attract night-flying insects which cross-fertilize them.

Stellaria Stitchwort, Chickweed

(Lat. stella: star, the flowers being star-shaped).

The young growing tips of the whole plants are chopped and eaten raw or cooked. Hot and cold drinks may be made from them.

In the 19th century, chickweed juice was prescribed for scurvy and eye inflammation. The chopped, boiled chickweed was used as a poultice for sores, swellings, and skin ulcers. The leaves are rich in iron and the plant provides a winter source of Vitamin C.

S. monantha

RANUNCULACEAE Crowfoot, Buttercup Family

(Crowfoot refers to the leaf shape).

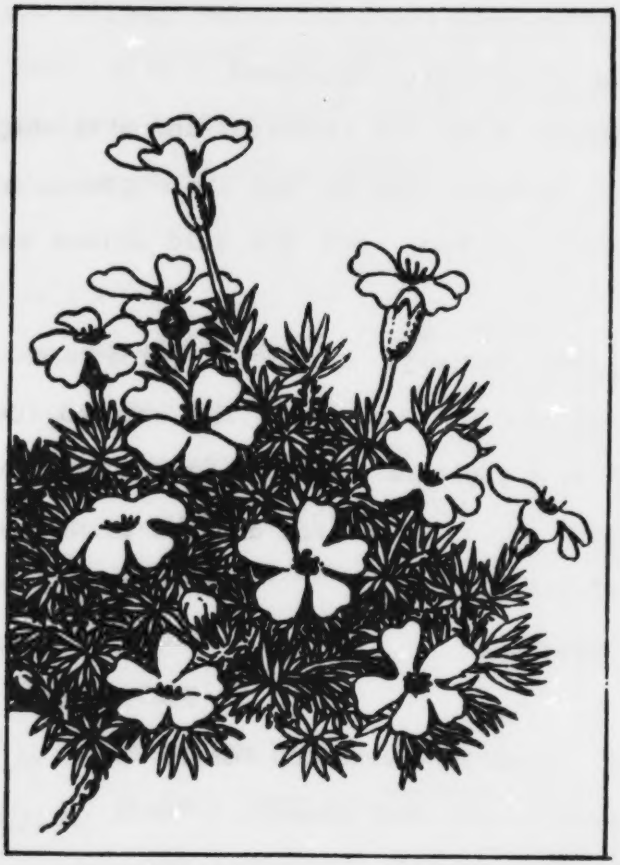
Aconitum Monkshood

(Gk. Aconitum: the ancient name of the plant, mentioned by the Greek physician Dioscorides in the 1st century).

Although the plant is poisonous, root extracts have been used in fever and in throat and respiratory infections.

Silene acaulis

Moss Campion
Moss Pink



A. *delphinifolium* Monkshood, Delphinium-leaved Aconite
The plant is highly poisonous, the tubers containing aconitin, an ester alkaloid which paralyzes the nerves and lowers blood pressure and body temperature. This substance from related species was used to poison spears and weapons of the Greeks and Romans and to poison bait for wolf traps. Roots of this species are said to have been used by Aleuts of Alaska as a deadly arrow poison.

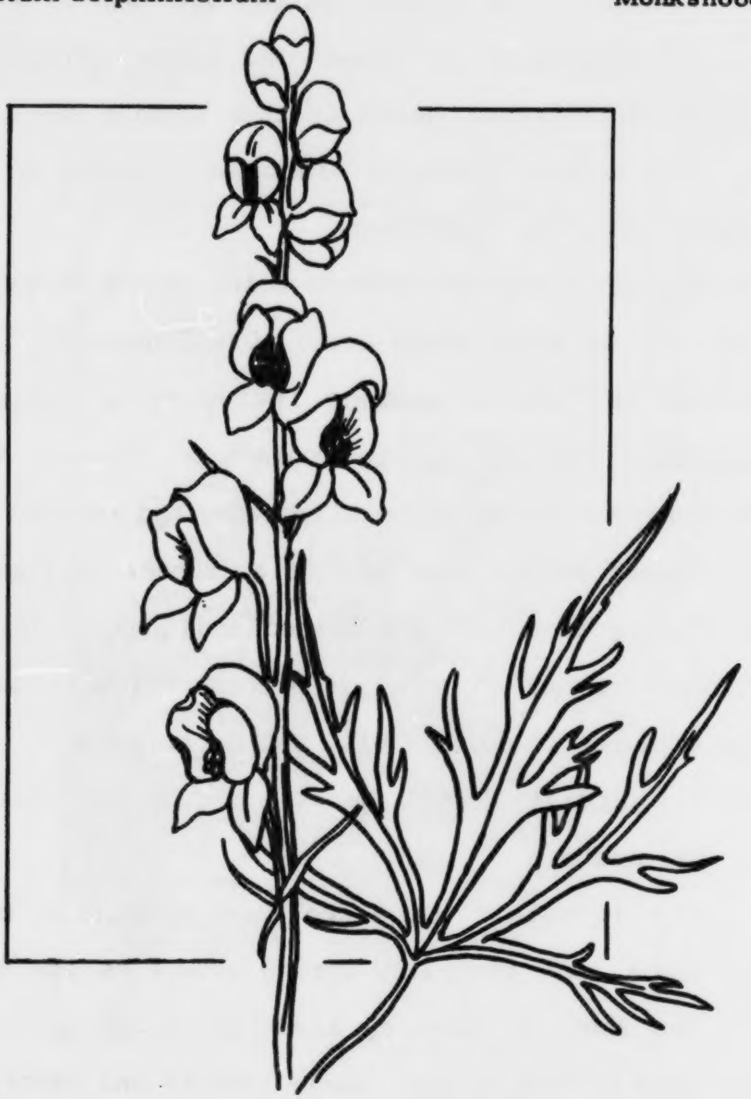
Anemone Anemone, Windflower
(Gk. *anemos*: wind, the flowers being easily disturbed by the wind, and the plumy seeds being wind-dispersed).
Several species of *anemone* including *A. cylindrica*, *A. multifida*, and *A. patens* contain a skin-irritating oil, protoanemonin which causes blistering and redness on contact. The crushed leaves were used as a counter irritant poultice. The cottony seed head was burned and inhaled for headaches. Lillooet Indians of Interior British Columbia observed that wild or domestic animals will not eat anemone.

A. *narcissiflora* Narcissus-flowered Anemone, Wild Narcissus
The rootstalk is eaten raw or boiled by Siberian Inuit, and the early spring growth on the upper end of the root is eaten by Aleutian Island natives. It is said to have a waxy, mealy texture and taste.

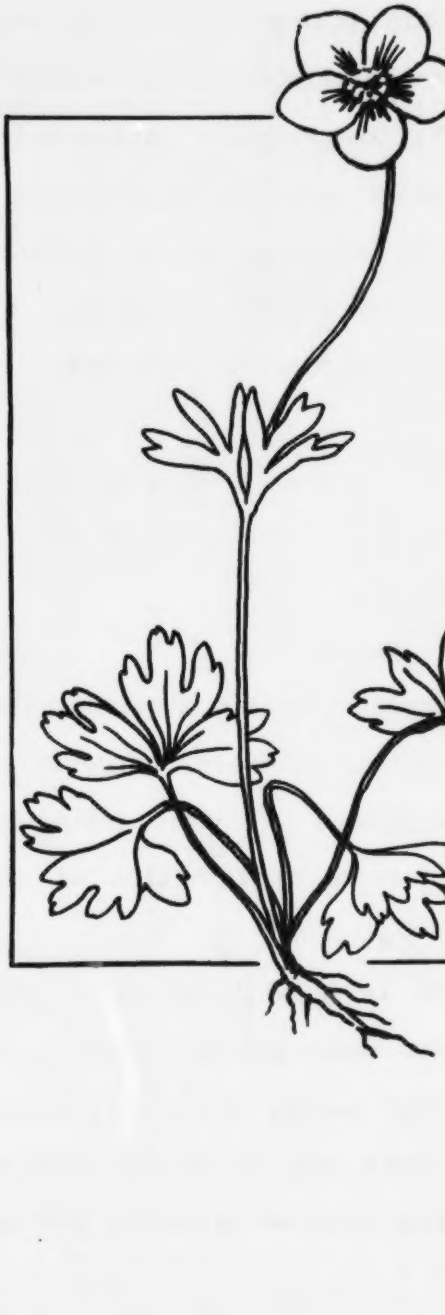
A. parviflora

A. richardsonii Yellow Anemone, Richardson's Anemone

Aconitum delphinifolium **Monkshood**



Anemone parviflora **Northern Anemone**



Delphinium Larkspur

(Gk. *delphinion*: Larkspur, derived from *delphin*: dolphin. The flowers of some species resemble the classical figure of the dolphin. The name Larkspur refers to one prolonged sepal which can be compared to the spur on the foot of a bird).

Delphiniums contain poison similar to aconitin, but less active. One of the alkaloids called delphinine has been used in medicine. The poison kills cattle but does not affect domestic sheep, which are used to eradicate the plants. The most toxic stage is the early spring growth.

Hopi Indians of New Mexico dried and ground Delphinium flowers to give a blue color to corn meal.

D. glaucum

(*Glacum* refers to greyish-blue bloom on the foliage).

This plant is a frequent cause of stock poisoning.

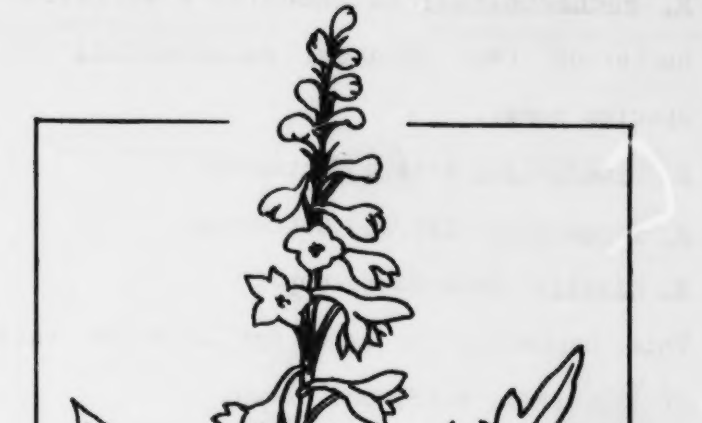
Ranunculus Buttercup

(Lat. *Ranunculus*: little frog).

Many *Ranunculus* species contain a poison called protoanemonin or anemenal, an acrid, volatile, narcotic substance. It is known to cause poisoning in cattle, raise blisters on human skin, and cause severe inflammation of the intestines if taken internally.

The poison may be rendered harmless by drying or cooking. California Indians made pinole, a meal made from ground sunflower and other seeds, such as buttercup seeds. The young tops and roots may be boiled like spinach, but the poison-bearing water must be carefully poured off.

Delphinium glaucum **Glaucus Larkspur**



Many children learn the folk tale that if you hold a buttercup under your chin and your chin appears yellow, it means you like butter.

R. aquatilis var. *eradicatus*

R. eschscholtzii Eschscholtz's Buttercup, subalpine Buttercup (see *Veratrum eschscholtzii* for source of species name).

R. hyperboreus Arctic Buttercup

R. lapponicus Lapland Buttercup

R. nivalis Snow-Buttercup

This buttercup is used for dyes of various colors; cream, green, buff, and brown.

R. pygmaeus Dwarf Buttercup

R. suphureus

This species grows on solifluction soil and often on open mineral soil.

Thalictrum Meadow-Rue

(Gk. *thallos*: a young shoot).

Most species are delicate plants which grow in shade. Dried fruits of some species were used by Blackfoot Indians of Alberta and Montana as perfume, and powdered as a stimulant for horses.

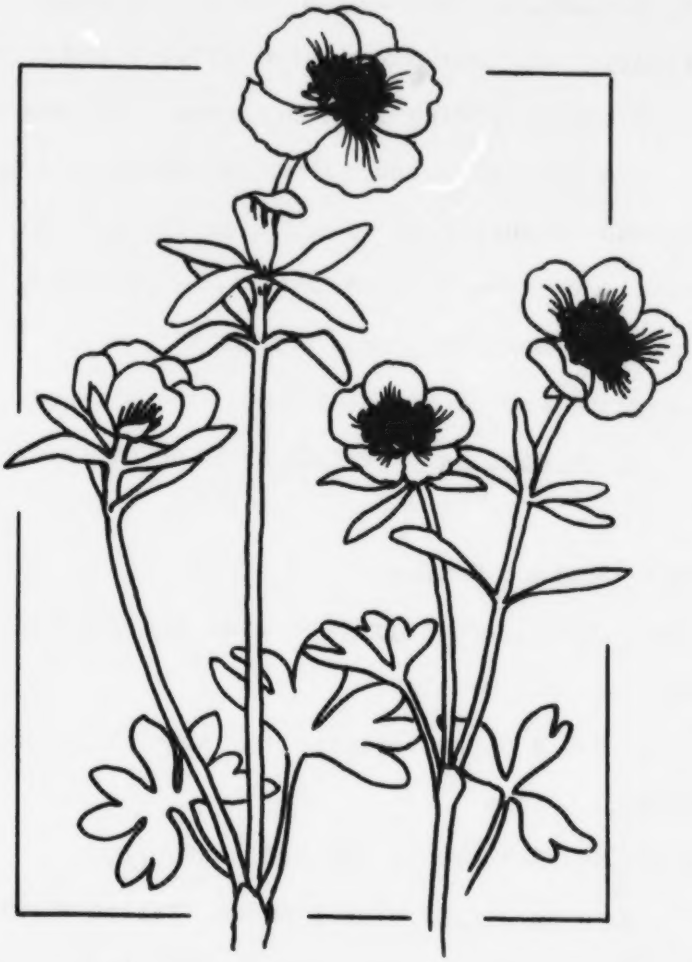
T. alpinum Arctic Meadow-Rue

PAPAVERACEAE Poppy Family

Papaver Poppy

(Lat. *Papaver*: poppy)

Ranunculus eschscholtzii **Eschscholtz Buttercup**



P. keelei

After Joseph Keele, a geologist who traversed the Mackenzie Mountains in 1907-1908).

FUMARIACEAE Earth Smoke or Fumitory Family

Corydalis Corydalis

(Gk. Korydallis: the ancient name of the crested lark).

Corydalis has been considered effective for various medical conditions including skin diseases. It has been used as a tonic, a purifying and softening agent, and a stimulant. It has been administered to aid digestion, treat jaundice, expel worms, and promote menstruation. Its powder has been recommended for bone decay and sores.

This plant may be abundant following a fire.

C. pauciflora Few-flowered Corydalis.

CRUCIFERAE Mustard Family

(Lat. crux: cross, and ferre: to bear because each flower bears a cross made of four petals).

The herbage has a characteristic mustard-like, pungent juice.

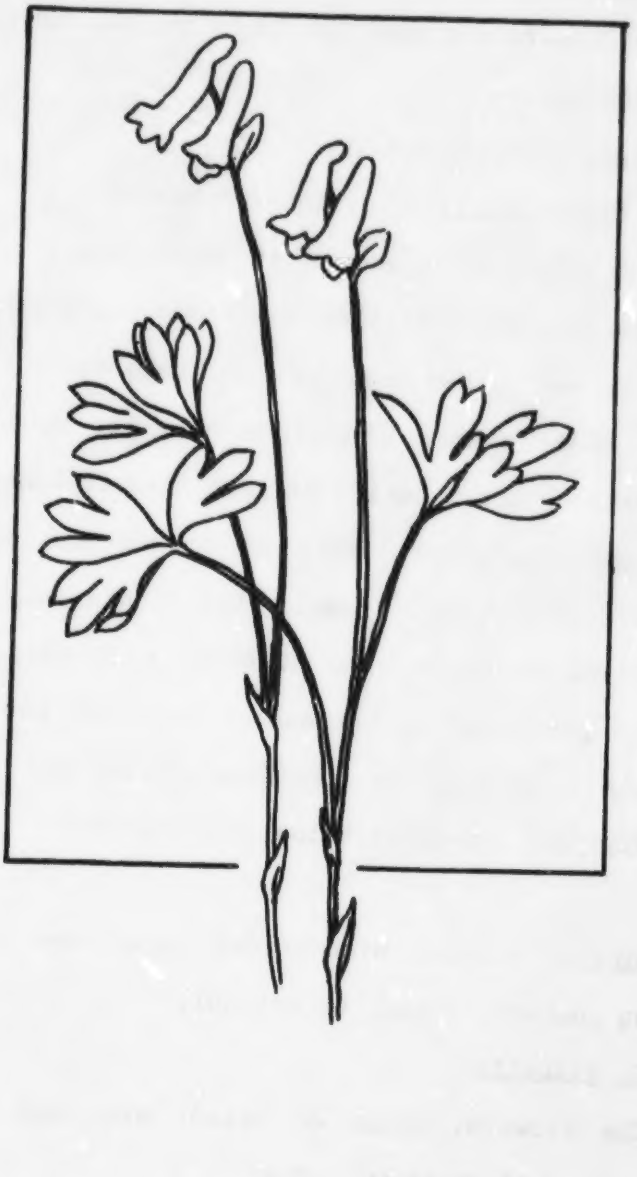
Barbarea Cress

(After St. Barbara of the 3rd century).

B. orthoceras Winter Cress, Yellow Rocket, Scurvy Grass

The young leaves, stems, and buds are eaten raw or boiled. They have a bitter radish flavor which spices up a salad. Buds and leaves are high in Vitamin C.

Corydalis pauciflora **Few-flowered Corydalis**



Cardamine Cress

(Gk. *kardia*: heart, and *damao*: to calm).

Cardamin has been used as a sedative, its name being derived from this use.

C. digitata Bitter Cress

C. pratensis Meadow Bitter Cress

The flowers are used for light yellow and bright apple-green dye.

Descurainia Tansy-Mustard

D. richardsonii Gray Tansy-Mustard

This plant is a source of seeds for pinole. The dry pods are pounded; then the seeds are parched and ground into meal. The meal is made into mush, bread, or used to thicken soup. Indians used the young growth as a potherb, often baking it in a firepit lined with stones. They alternated layers of greens and hot stones and covered the top, steaming the plants half an hour. The greens could be used at once or dried for future use. The plant has an unpleasant odor and bitter taste when raw, and some of the bitterness can be removed by changing the water twice when boiling.

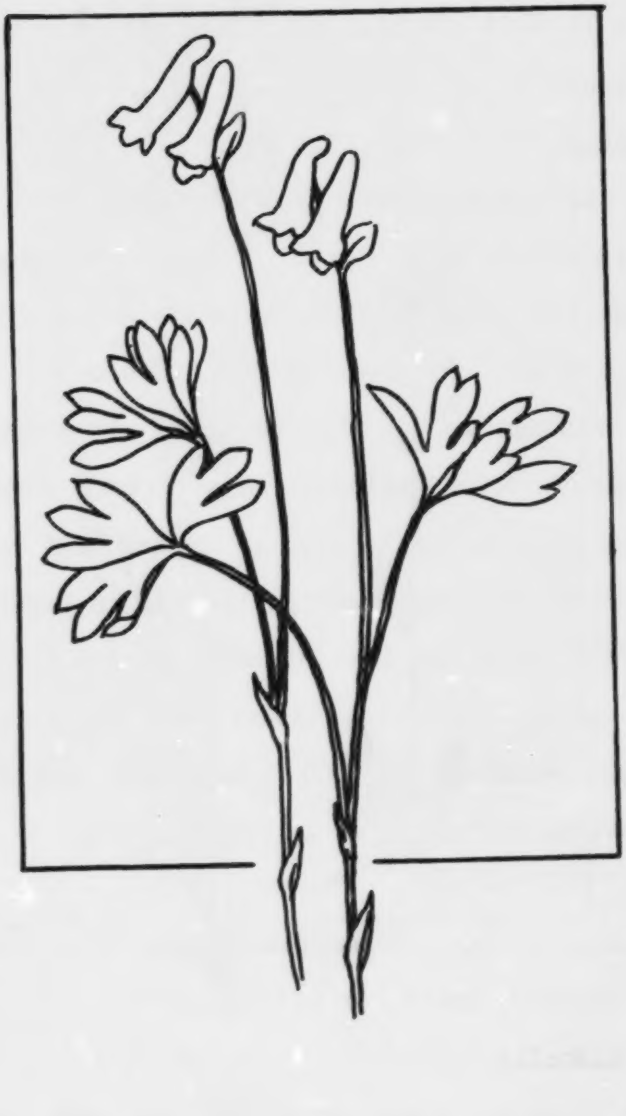
Draba

(Gk. *draba*: a name Diascorides gave some kind of cress, meaning mustard, acrid, or biting).

D. glabella

The flowers, fresh or dried, are used to make cream, gold, and chartreuse dye.

Corydalis pauciflora Few-flowered Corydalis



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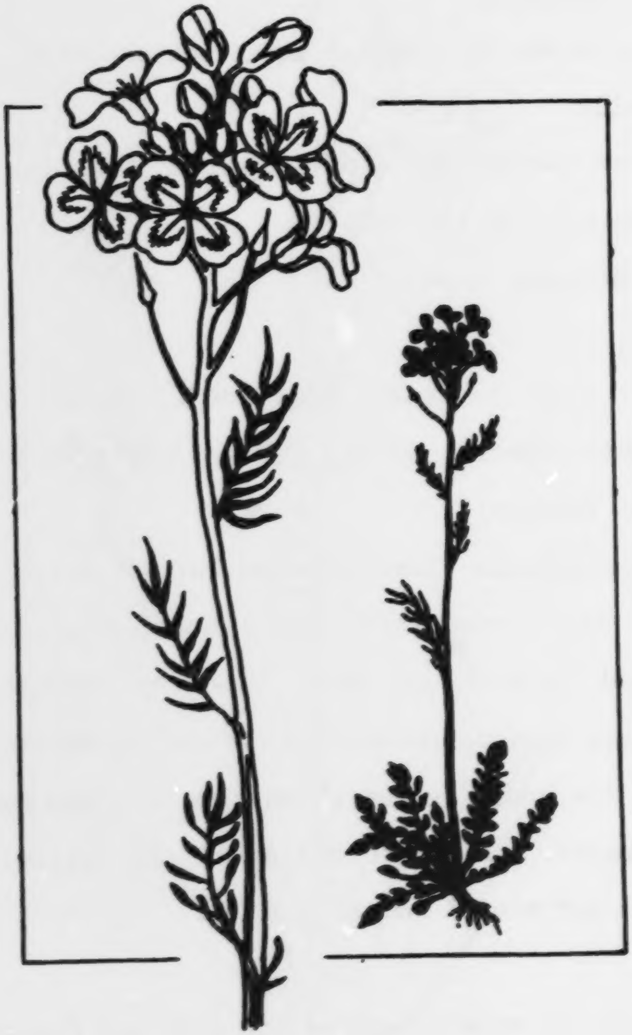
Cardamine pratensis **Cuckoo Flower**



D. longipes

D. ogilviensis

D. palanderiana

D. stenoloba

Eutrema

E. edwardsii

This plant is found on solifluction areas.

Lesquerella

(After Leo Lesquereux, a distinguished American paleobotanist and bryologist of the 1800's).

L. arctica Bladder Pod

Parrya

(After British navigator Capt. W.E. Parry, who found the first known species of *Parrya* while on his search for the Northwest Passage).

P. nudicaulis Naked-stemmed Parrya, Parry's Wall Flower The thick root which has a horseradish-like flavor is added to fish and meat stews by coastal Inuit. On little Diomede Island, in the Bering Strait, the natives eat the young leaves which grow in rosettes like little cabbages. They are collected all spring, summer, and fall and stored raw in seal oil.

Thlaspi

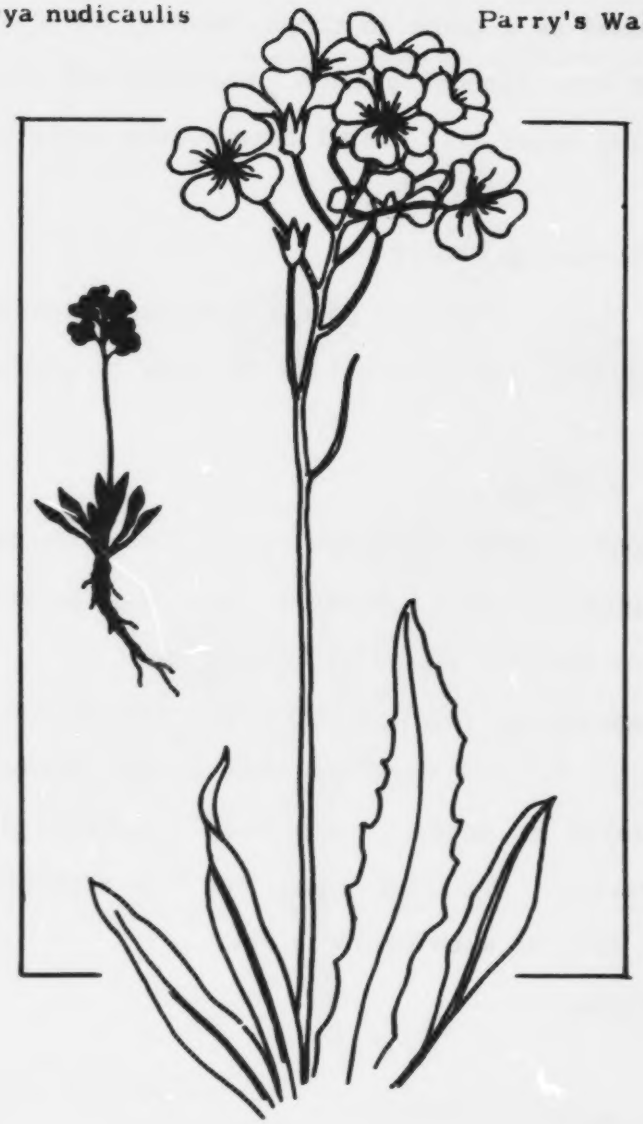
(Gk. *thlan*: to crush, because the pods are flattened).

T. arvense Field Pennycress, French Weed, Fan Weed, Stink Weed.

This plant was introduced from Europe. The deeply notched pods are called "pennies."

Parrya nudicaulis

Parry's Wallflower



The plant is high in vitamin C and G and contains sulpher. Small amounts of the fresh leaves may be used in sandwiches, salads, and hors d'oeuvres. The young tender shoots, pods, and seeds may be boiled or dried and used as a spice in soups, sauces, and casseroles, or mixed with blander greens. Changing and discarding the cooking water will dispel some of the bitterness.

CRASSULACEAE Stonecrop Family

(Lat. crassus: thick, referring to the succulent leaves and stems. Stonecrop means that the plants like to grow on walls and rocky ground.

Rhodiola Roseroot

(Gk. rhodon: a rose, referring to the rose-scented roots).

R. integrifolia Western Roseroot, Rosewart, King's Crown, Hen and Chickens, Stonecrop.

(Integrifolia refers to the way leaves overlap on the stem). The succulent young stems and leaves are edible as salad or potherb, and they are best picked before flowering. Siberian Inuit eat the rhizomes boiled in seal fat, or with reindeer fat.

R. rosea

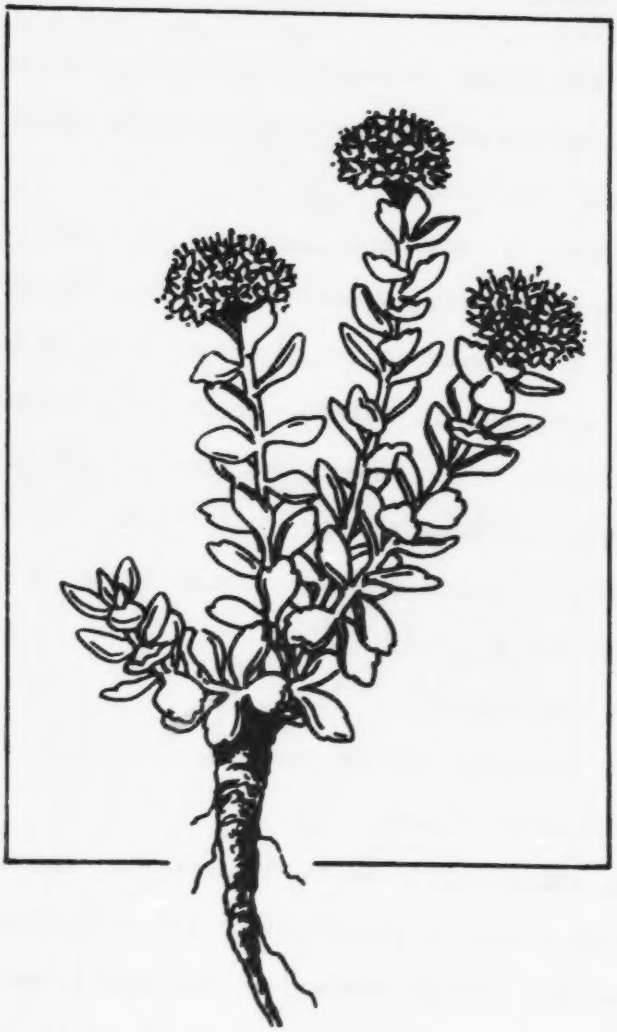
SAXIFRAGACEAE Saxifrage Family

Chrysosplenium Golden Saxifrage

(Gk. chrysos: gold, and splen: spleen, referring to its color and its ancient medicinal use).

Rhodiola integrifolia

Roseroot
Rosewort
King's Crown



C. tetrandum Golden Saxifrage

The Golden Saxifrage flowers produce yellow and green dyes.

Parnassia Grass-of-Parnassus

(Called Grass-of-Parnassus by Dioscorides, after Mt. Parnassus).

P. kotzebuei Kotsebue Grass-of-Parnassus

P. palustris Northern Grass-of-Parnassus

Saxifraga Saxifrage

(Lat. *saxum*: a rock, and *frangere*: to break).

Drawings of Saxifrages date from before Christ.

Many of the plants in early stages have edible leaves which may be used raw in salads, or cooked; creamed, cooked with ham or bacon, or in "sweet and sour saxifrage."

Saxifraga produces yellow gold, and greenish-yellow dyes, depending on which species, which parts of the plants, and which method are used.

S. adscendens

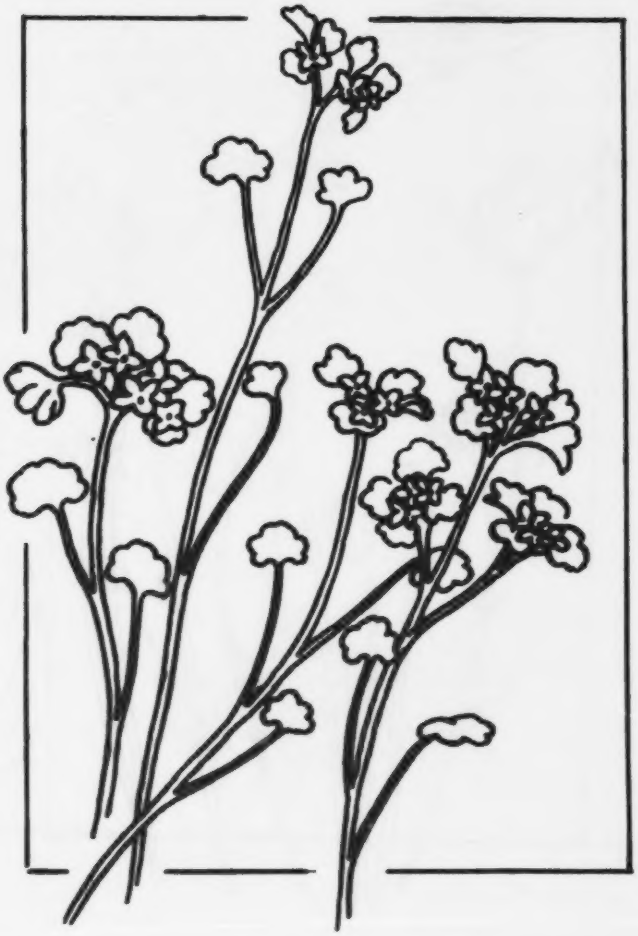
S. aizoides Yellow Mountain Saxifrage (Gk. *aei*: always, and *zoon*: alive).

S. bronchialis Spotted Saxifrage, Common Saxifrage

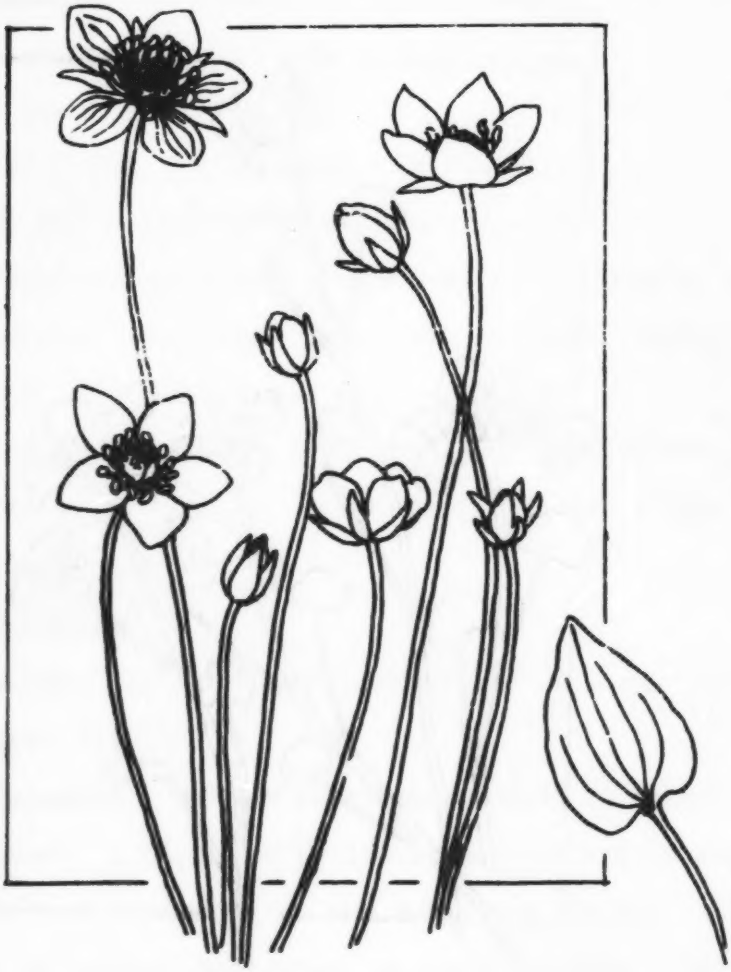
This plant is protected by law in England and is said to be the rarest member of the Saxifrage family. It is hardy in winter and grows on north slopes. When it grows on limestone, tiny white flecks of calcium carbonate fringe the leaves.

Chrysosplenium tetrandrum

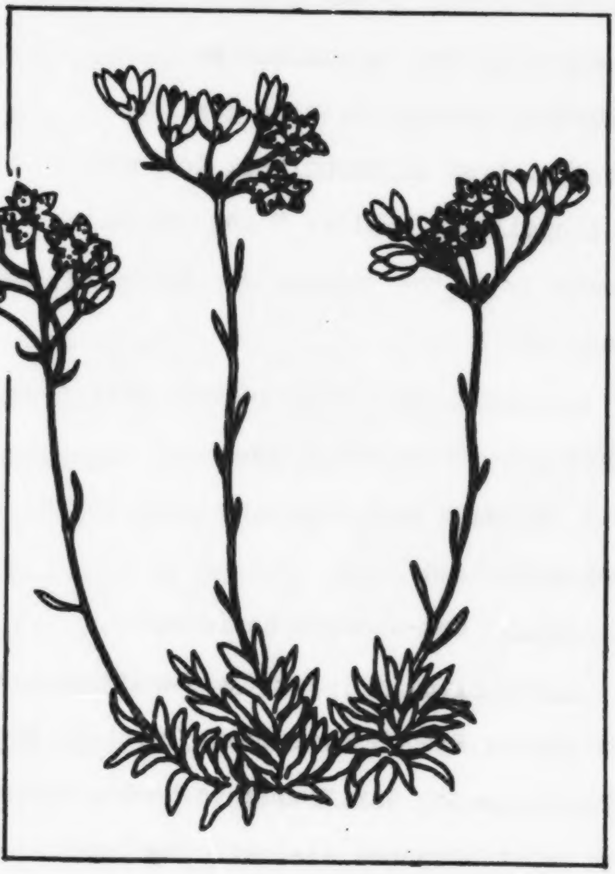
Water Carpet
Golden Saxifrage



Parnassia palustris Northern Grass-of-Parnassus



Saxifraga bronchialis **Spotted Saxifrage**



S. cernua Nodding Saxifraga, Drooping Saxifrage, Bulblet Saxifrage. This plant is also protected in England and hardy in winter. It reproduces by means of small red bulbils at the base of the leaves which fall off and lie dormant under the snow until spring. It often does not flower at all.

The flowers and stems produce a greenish-yellow dye.

S. davurica ssp. *grandipetala*

S. eschscholtzii Cushion Saxifrage

(see *Veratrum eschscholtzii* for note on species name).

S. flagellaris Spider Plant, Whiplash Saxifraga

(Named from the threadlike white or red, sticky-hairy runners).

S. hieracifolia Hawk-leaved Saxifrage, Stiff-stemmed Saxifrage, Rusty Saxifrage

(Gk. *hierax*: hawk, because the leaves are thought to look like hawks).

S. lyalli Red-stemmed Saxifrage

S. oppositifolia Purple Saxifrage, Purple Mountain Saxifrage, French Knot Moss, Twinleaf Saxifrage

(Unusual among Saxifrages in having opposite leaves).

The sweet blossoms are eaten by Inuit.

Cream, gold, and green dyes are produced from flowers or plants and roots.

S. punctata Brook Saxifrage, Heart-leaved Saxifrage, Cordate-leaved Saxifrage, Wild Cucumber, Salad Greens. Inuit collect the leaves in spring before the plant blooms and enjoy them raw with seal or walrus oil. This plant is a good source of Vitamins A and C if eaten soon after picking. The leaves may be eaten cooked or raw.

S. radiata

S. tricuspidata Prickly Saxifrage, Three-toothed Saxifrage

The blossoms are sticky, sweet, and good to eat.

Various shades of gold dye are produced by using blossoms, leaves, or the whole plant, either fresh or dried.

ROSACEAE Rose Family

Dryas Mountain Avens

(Lat. _dryas_: wood nymph).

D. drummondii Drummond Mountain Avens, Toothleaf Dryas, Wood Nymph, Yellow Dryas, Yellow Mountain Avens

(After James Drummond, Scottish naturalist of the 1800's).

The root nodules store nitrogen.

D. integrifolia Mountain Avens, Smoothleaf Dryas

Mountain Avens is the official flower of the Northwest Territories. The plant is especially hardy and adapted to arctic and alpine conditions; the cone-shaped buds help draw warmth to the plant.

The blossoms produce a vivid green dye as do the plumes when the plant goes to seed.

Fragaria Strawberry

(Lat. fragans: fragrant, and fraga: strawberries, referring to the fragrance of the berry).

Strawberry fruits are eaten by a number of birds and small mammals which help distribute the seeds. Surely no one need to be told of the deliciousness of strawberries, but the wild strawberries have an even more delicate flavor than domestic ones. Indians steeped fresh leaves in boiling water to make a clear sweet tea. British Columbia Indians mashed and dried them in cakes for winter use. Thompson Indians used the flowers, leaves, and stems to flavor roots in cooking pits. The properties of Fragaria vesca described in Hermann's Herbs and Medicinal Flowers (1973), probably apply to all wild strawberries. It relieves fever and thirst, is diuretic, and sometimes laxative. It has been recommended for gout and gravel (small calcareous concretions in the digestive tract). The strawberry root is astringent and has been used in treating genito-urinary diseases and diarrhea. An infusion of leaves is said to be diuretic and to induce perspiration. A daily dose of strawberry tea, being rich in Vitamin C, is said to be a winter cold preventative.

F. virginiana Common Strawberry, Scarlet Strawberry

Geum Avens

(Lat. geyo: to impart a relish; geum was the Latin name of Avens. The shredded roots of a Mediterranean species were once used as relish).

In England Geum roots were marinated in wine, then eaten to relieve heart trouble.

G. rossii Ross's Avens

The rhizome is eaten raw, usually with fat, by Siberian Eskimos. It may be boiled to produce weak tea.

Potentilla Cinquefoil

(lat. *potens*: powerful, referring to the medicinal qualities. Cinquefoil refers to the five-fingered leaves).

The roots of at least two species of Cinquefoil are edible, usually roasted, boiled, or fried, but sometimes eaten raw like parsnips. They may be dried for storage. By some Indians they were prized and given as wedding gifts.

Cinquefoil flowers give a brilliant yellow dye, while the whole plant may be cooked to produce a red dye.

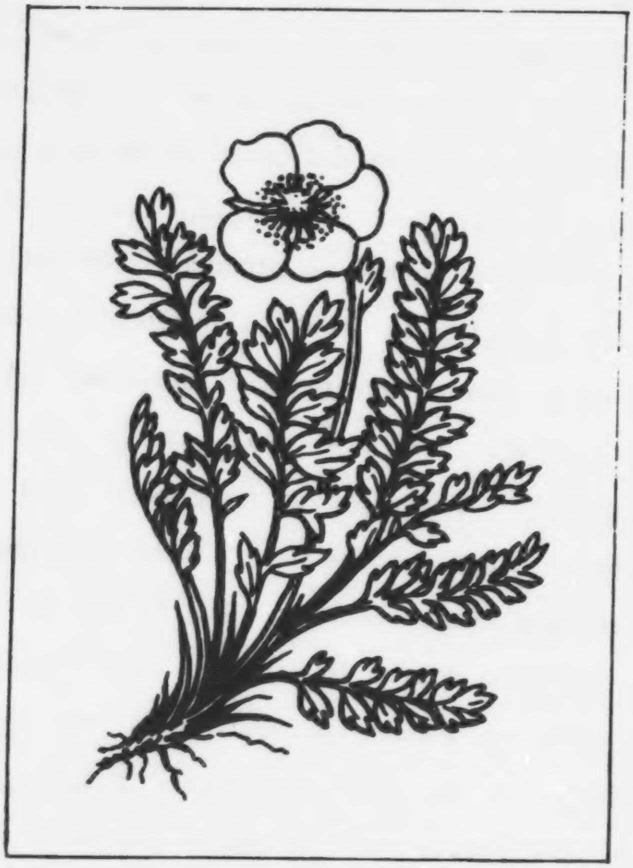
Potentilla anserina is used in homeopathic medicine, where infinitesimal doses can produce symptoms like the disease being treated. It is said to be effective as an antispasmodic. Some species have been used as a laxative. The roots of other species when boiled in vinegar may be used on sores and inflammations, administered with honey for coughs, and when boiled in wine may alleviate pain in joints. It is used to reduce bleeding, as an eyewash, and for toothache. In the past Tormentil, *Potentilla erecta*, was used to cure colic; milk in which the roots had been boiled was given as treatment.

In the Hebrides Potentilla was used as a tanning agent for fishnets.

P. biflora Two-flowered Cinquefoil

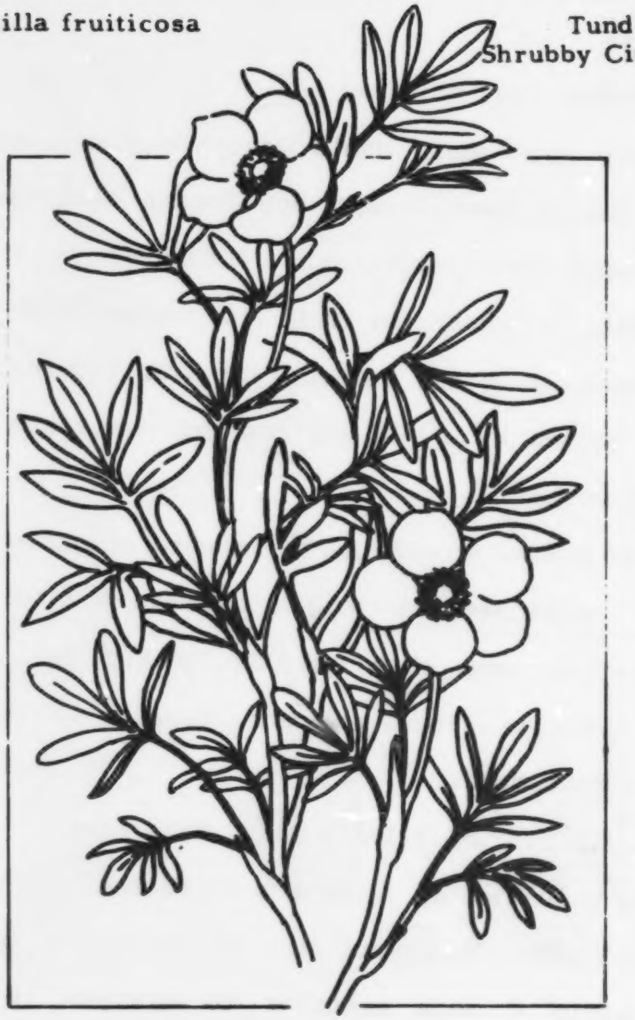
P. fruticosa Shrubby Cinquefoil, Tundra Rose

Geum rossii **Ross's Avens**



Potentilla fruiticosa

Tundra Rose
Shrubby Cinquefoil



The dry flakey bark was used for tinder when making fire with twirling sticks by Blackfoot Indians of Alberta and Montana.

P. uniflora One-flowered Cinquefoil

Rosa Rose

(lat. *roseus*: rosy or pink)

Roses have been among Man's favorite plants throughout the ages. The ancient Greeks and Romans used the petals for perfume and even carpeting. According to the theory of signatures, a thorn is said to resemble a dog's tooth. Pliny, writing in the 1st century A.D. records that a Roman soldier bitten by a mad dog applied the roots of a Rose to cure his wound.

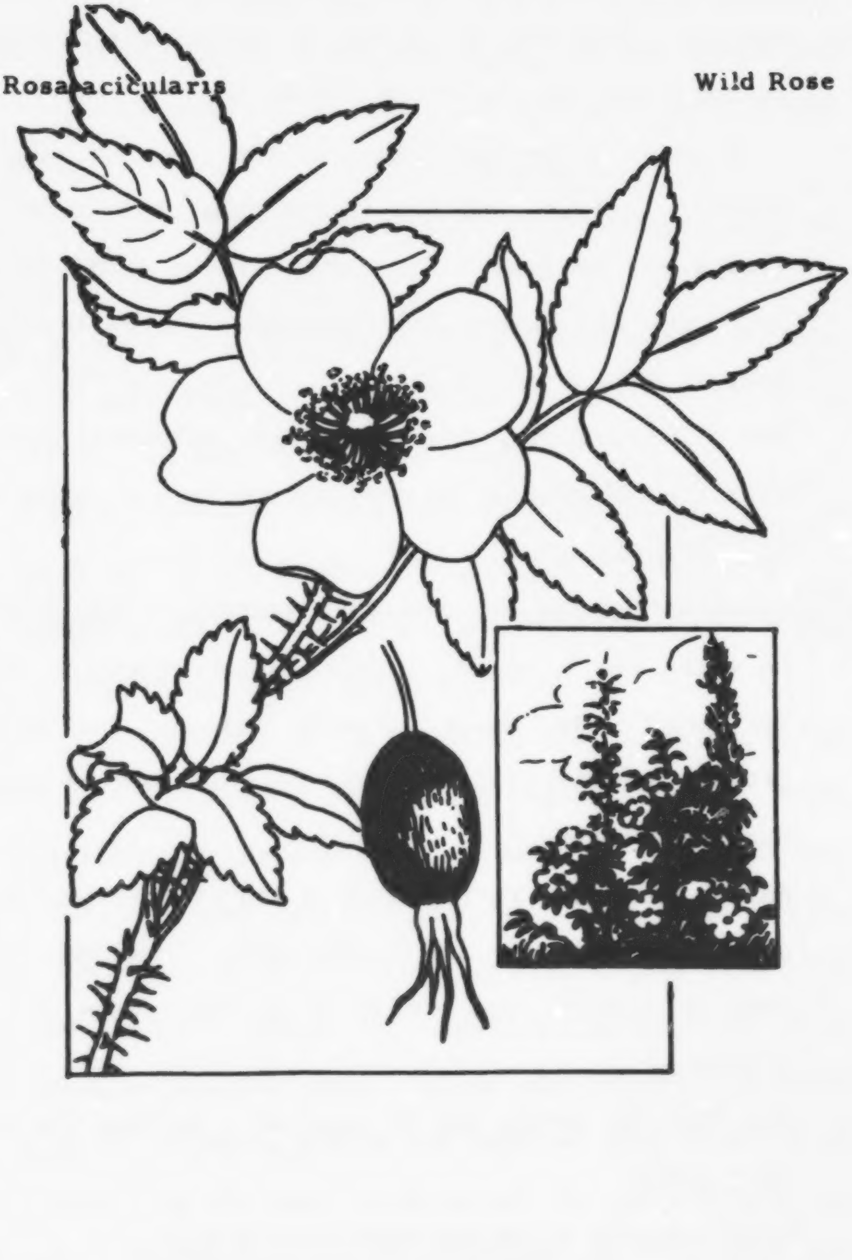
Many Rose plants produce large amounts of pollen, rather than nectar. Bees use the pollen to make a kind of bread for their larvae, and they use the petals for landing pads. Crushed foliage liberates benzaldehyde, which has an odor like bitter almonds.

R. acicularis Prickly Rose, Wild Rose

The Wild Rose is Alberta's Flora Emblem.

Rose hips or fruits are an extremely good source of Vitamin C much superior to oranges, and retain the vitamin well even when the fruits are stored by drying or cooking. They also contain Vitamin A, calcium, and iron. They are used for jam, jelly, syrup, marmalade, and juice, often mixed with tarter berries because of their bland taste and lack of pectin. Dried hips may be

Rosa acicularis **Wild Rose**



pulverized and then substituted at the ratio of one tablespoon of powder for one cup of rose hips. The hips may be picked any time after they turn red. They are best after the first frost and may be picked frozen all winter. They may be cooked or ground with water in a blender and strained, then made into puree, or dried with apple puree and sugar in the oven to make fruit leather, a tasty and nutritious snack. Even the green fruits may be used. The puree may be added to almost any food for flavor and vitamins. In Norway, a cold soup is made from the hips.

The leaves, roots, fruits, petals, branches, and inner bark are all be used to make a mild tea, to which spices are often added.

Green shoots may be used as a potherb. The petals may be eaten raw in salad, candied, used in syrup, or dried for tea. The seeds, ground, boiled, and strained, produce a syrup rich in Vitamin E which may be used as a sugar substitute.

Salish and Haida Indians peeled and ate the tender young shoots as a tonic and beauty aid. Blackfoot Indians made a bitter, red drink from the roots to treat diarrhea.

Oil from the petals may be used as a perfume for bath or hair rinse.

Petals may be dried and used in a sachet.

The dried fruits were once used as beads for necklaces.

Rubus Raspberry

(lat. *ruber*: red).

Wild Raspberries are tasty, pleasant smelling, and a good source of Vitamin C. They are used to make syrup, jellies, wine, and liqueur. The tender and young peeled shoots and twigs are also edible and pleasant to chew on. The leaves make good tea.

The young shoots of Raspberry plants will produce grey to black dye.

Raspberry is used to slake thirst in a fever and to promote perspiration and urination. Tea from the leaves or root, dried or fresh, is used to cure diarrhea.

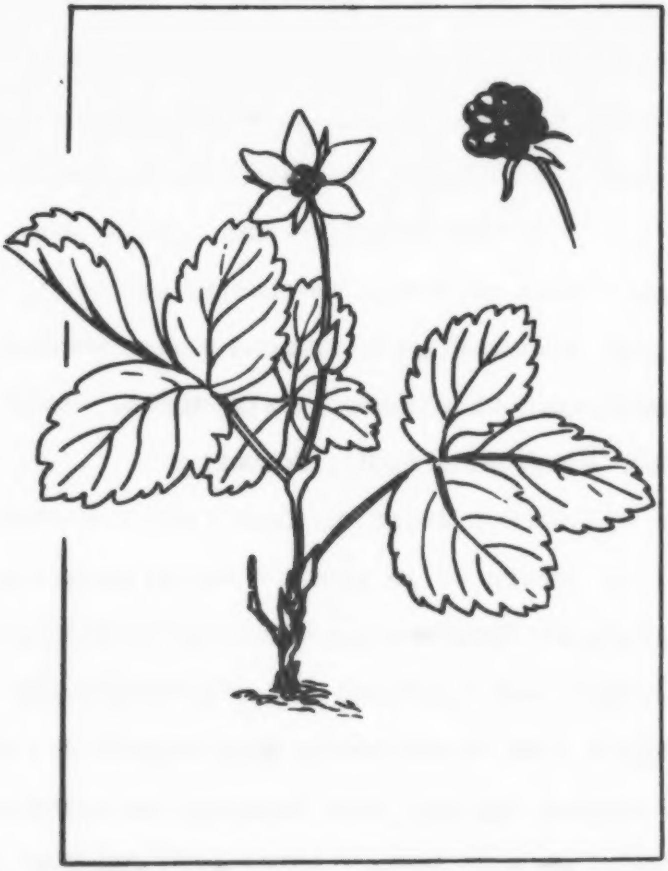
R. acaulis Dwarf or Arctic Raspberry, Dewberry

R. arcticus Arctic Bramble, Nagoon Berry, Wineberry

R. chamaemorus Cloudberry, Bake-apple, Baked-apple Berry, Maltberry, Mars Apple, Foxberry

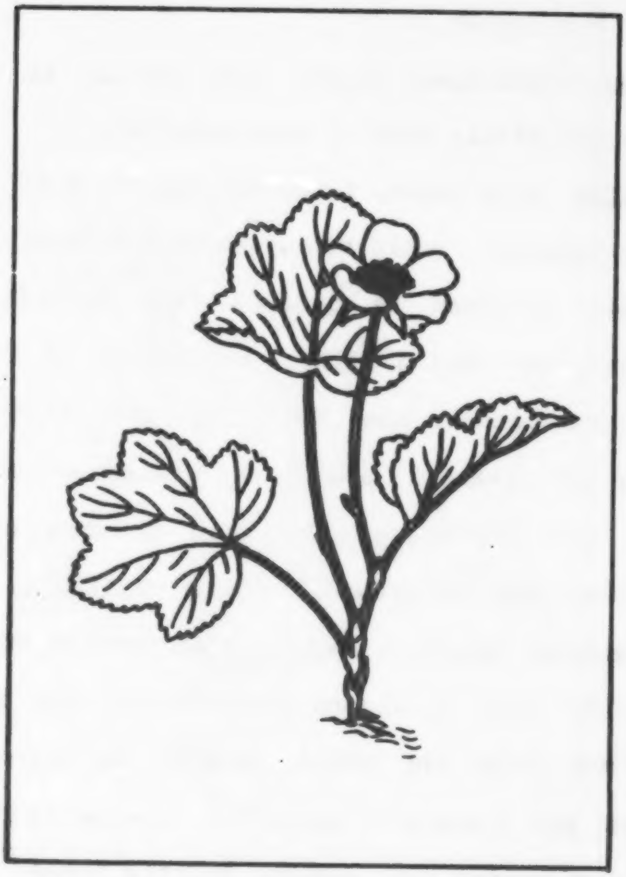
This is a favorite fruit of Inuit who preserve it in seal oil or freeze it in kegs in the permafrost. Many people consider Cloudberries the most delicious of the wild berries, and eat them raw with sugar and cream. Inuit make a kind of ice cream by mixing them with seal oil and chopped tallow, then beating the mixture until it resembles whipped cream. Haida and Tsimshian Indians of British Columbia picked the berries when still hard and then stored them underwater in tall boxes or barrels. Cloudberries make excellent jam. In Finland, they are used in making liqueurs.

Rubus arcticus Arctic Bramble, Nagoonberry



Rubus chamaemorus

Cloud Berry
Baked-Apple Berry



Sibbaldia Sibbaldia

(After Sir Robert Sibbald, a Scottish professor of medicine at Edinburgh University in the 1700's).

S. procumbens Procumbent Sibbaldia

(Lat. procumbens: falling forward, because the stems lie flat, in low mats).

LEGUMINOSAE Pea Family

(Lat. legumen: leguminous plant, from legere: to pick, probably referring to the edible peas of some species).

Astragalus Milk Vetch, Locoweed, Rattle Weed

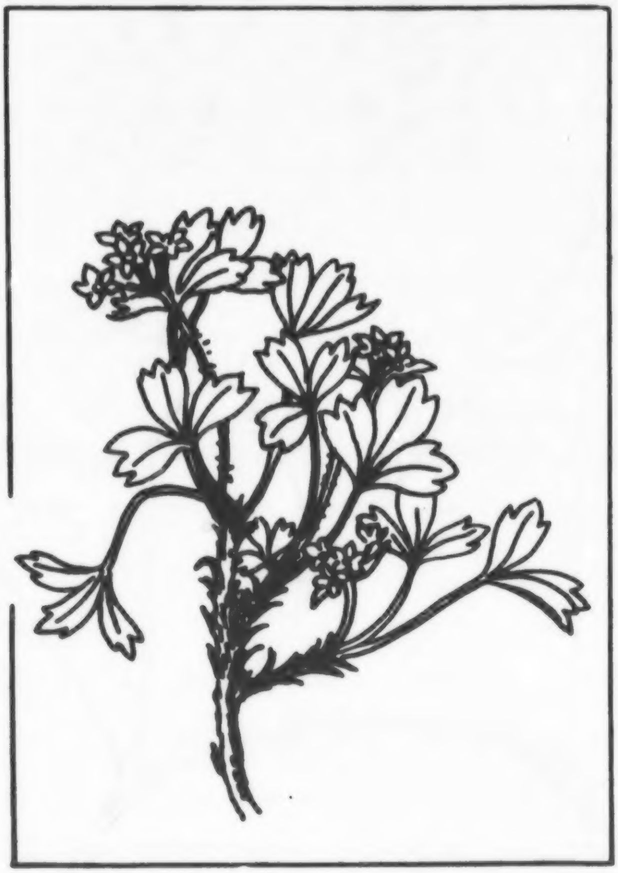
(Gk. astragalos: ankle bone, perhaps because of the shape of the pods. Locoweed is derived from Spanish loco: crazy, describing the mental illness brought on in livestock by the poison contained in some species). Some kinds of Astragalus contain the alkaloid locoine and are poison on any soil, and others are poisonous only when growing on selenium or molybdenum bearing ground. As in Oxytropis, locoine causes brain disease amoung animals. Some species of Astragalus are especially able to absorb large quantities of selenium and molybdenum from the soil, thereby becoming poisonous to animals and humans. Selenium causes "blind staggers"; molybdenum causes poor growth, brittle bones, and anemia.

A. alpinus Alpine Milk Vetch, Mountain Vetch

The flowers, leaves, and stems produce yellow to greenish-yellow dyes.

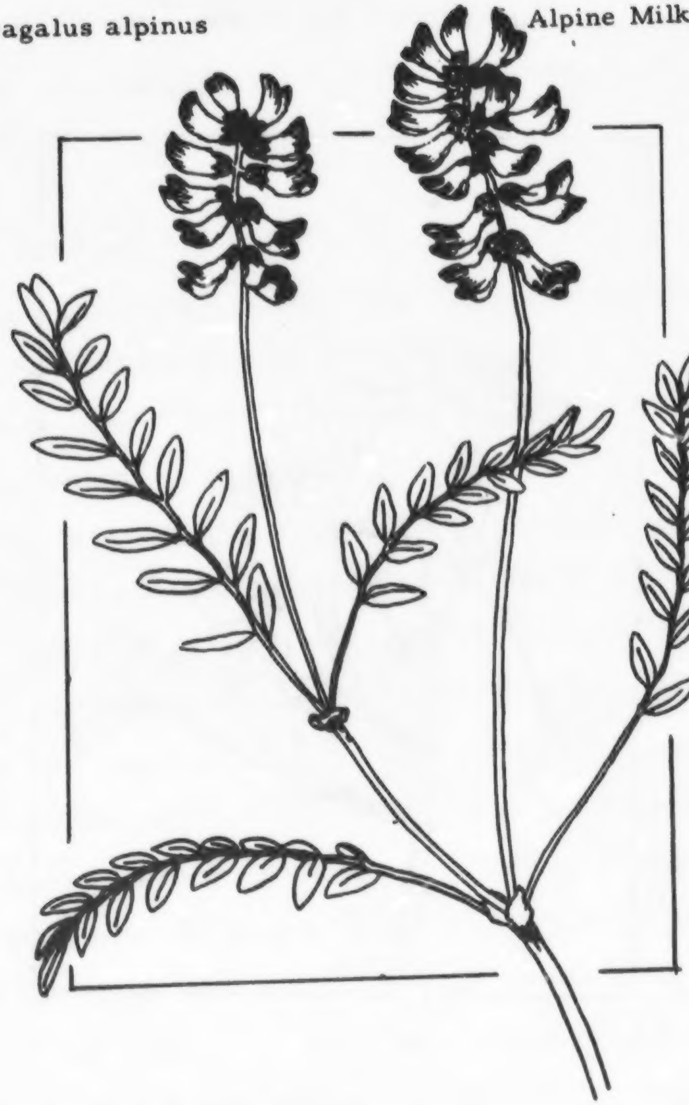
A. eucosmus Milk Vetch

Sibbaldia procumbens **Procumbent Sibbaldia**



Astragalus alpinus

Alpine Milk Vetch



A. unbellatus Hairy Arctic Milk Vetch

This plant has an edible root.

Hedysarum Liquorice Root

(Gk. *hedys*: sweet, and *aroma*: smell).

H. alpinum Liquorice Root, Indian Potato, Bear Root, American Hedysarum

The fleshy roots are edible, and taste something like young carrots when cooked. They are best in August but may be eaten in spring. The root and young stem may be eaten raw, boiled, or roasted. The roots are used by both Inuit and Indians.

Bears and mice like Liquorice root, and it has been found to be the main food of grizzly bears in some areas.

H. mackenzii Wild Sweet Pea, Mackenzie's Hedysarum

This plant is poisonous, and care must be taken not to mistake it for *H. alpinum*.

Lupinus Lupine

(Lat. *lupus*: wolf, because these plants are thought to rob the soil of its fertility, while actually, being legumes, they enrich the soil by adding nitrogen to it).

Some Lupines are poisonous, containing toxic alkaloids. The seed pods poison livestock, especially sheep.

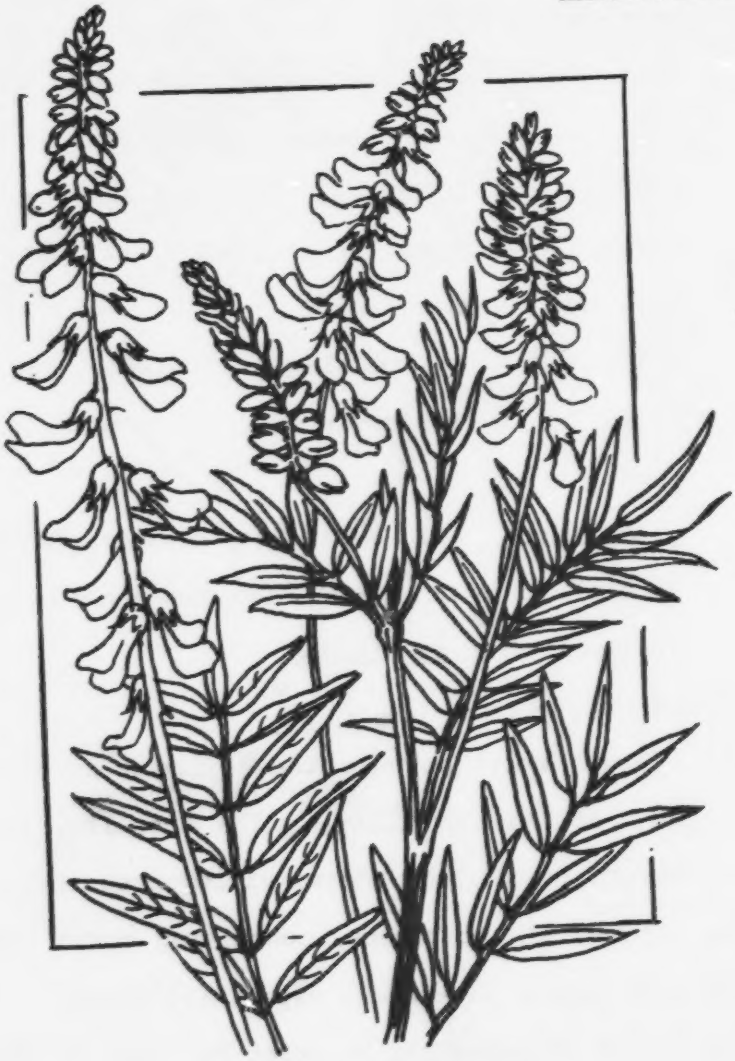
Some Lupine rhizomes may be eaten but only if cooked.

L. arcticus

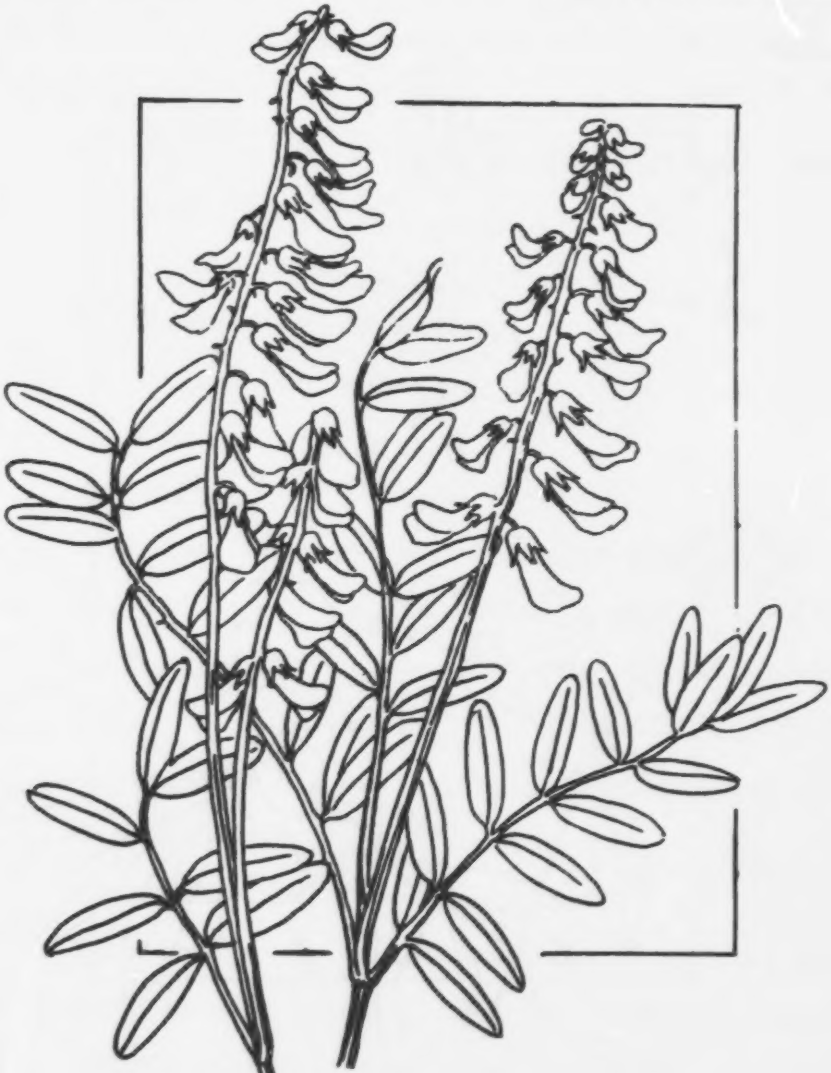
Seeds reputed to be 10,000 years old were germinated by G.A. Mulligon and Dr. A.E. Porsild in 1966.

Hedysarum alpinum

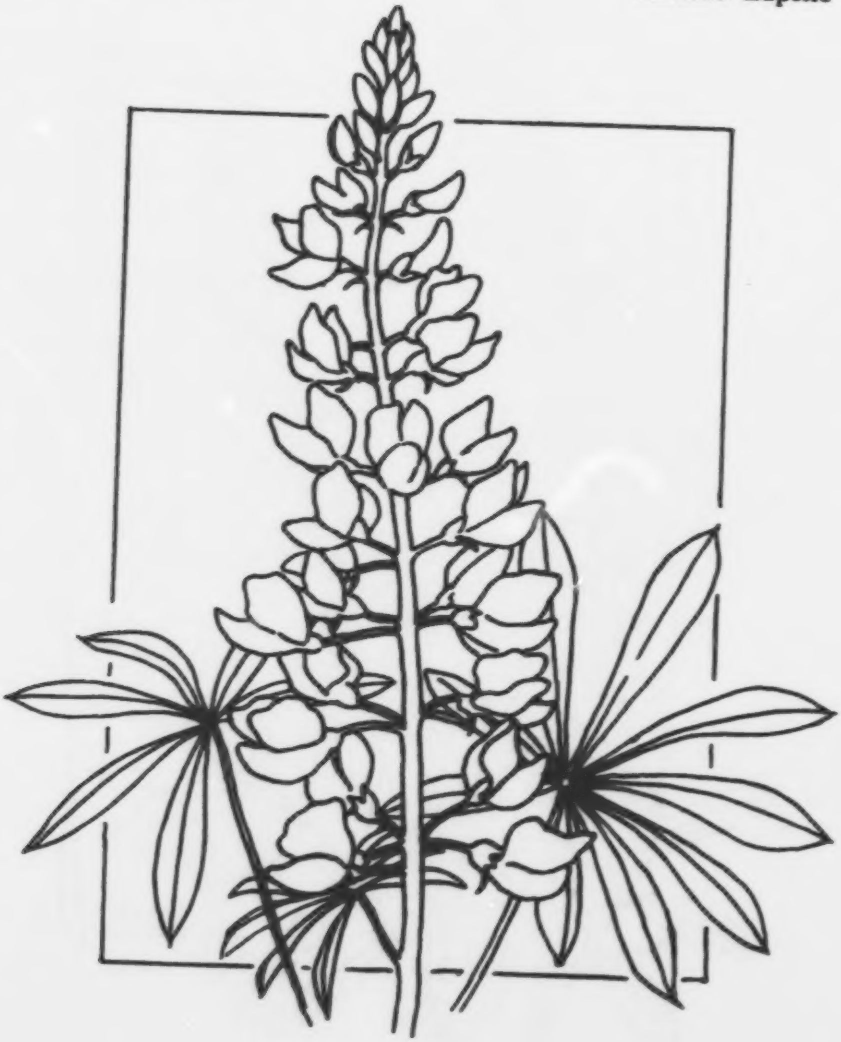
American Hedysarum
Licorice Root
Indian Potato



Hedysarum mackenzii		Wild Sweet Pea



Lupinus arcticus **Arctic Lupine**



Oxytropis Locoweed

(Gk. *oxus*: sharp, and *tropis*: keel, referring to the shape of the blossom). All parts of many species of Locoweed contain locoine, an alkaloid poison, responsible for loco disease among animals. Large amounts must be eaten over a long time to kill an animal, but the plants are habit-forming, so this often occurs.

O. campestris Northern Yellow Oxytrope, Late Yellow Locoweed, Crazyweed

(Lat. *campestris*: field-loving).

O. deflexa ssp. *foliolosa*

O. deflexa ssp. *sericea*

O. jordalii

O. maydelliana Locoweed, Crazyweed

The large, stringy roots are often eaten by Inuit.

The leaves are used to produce a clear yellow dye. The yellow blossoms produce a muddy yellow or chartreuse dye.

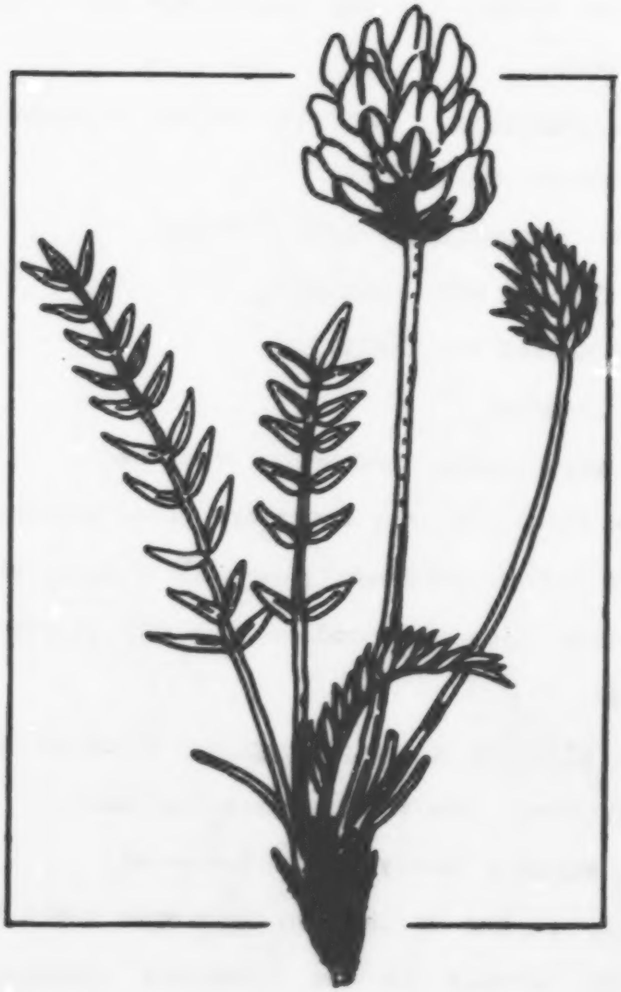
O. nigrescens ssp. *pygmaea* Blackish Oxytrope, Black Oxytrope. The root is eaten by Inuit.

O. spicata Early Yellow Locoweed

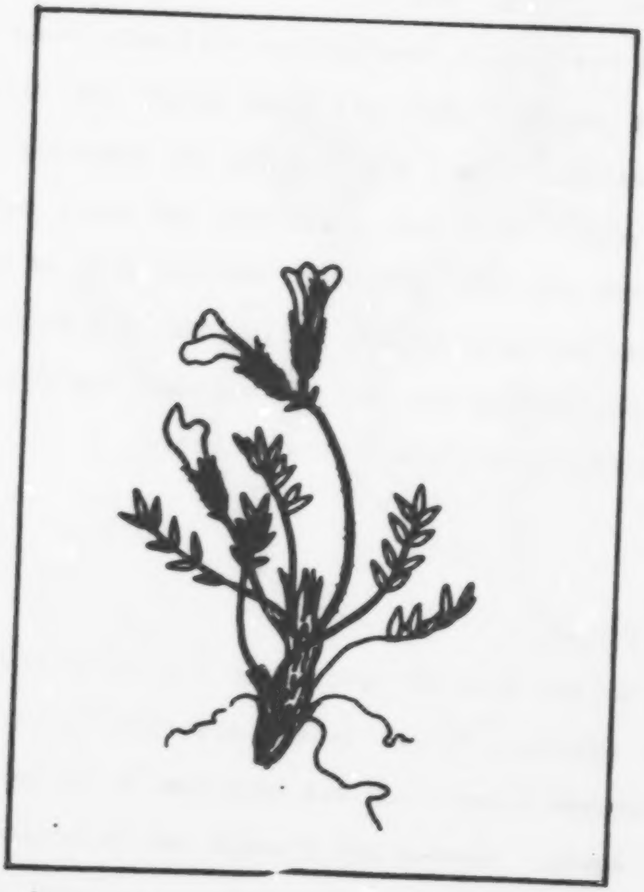
This is one of the two Oxytropes which have caused the most trouble to the livestock industry, bringing on serious mental disease among cattle.

O. sheldonensis

Oxytropis campestris **Northern Yellow Oxytrope**



Oxytropis nigrescens **Blackish Oxytrope**



EMPETRACEAE Crowberry Family

Empetrum Crowberry

(Gk. *en*: upon, and *petros*: a rock, because these plants grow on rocks where very little soil exists).

E. *nigrum* var. *hermaphroditum* Crowberry, Curlewberry, Black Crowberry

(lat. *nigrum*: black).

The black juicy berries are variously described as bland and sweet. They are best after the first frost has sweetened them, and cooking or freezing enhances the flavor. They are a favorite of Inuit and Indians who often mix them with other berries such as blueberries.

They are good in pie, jelly, jam, and muffins.

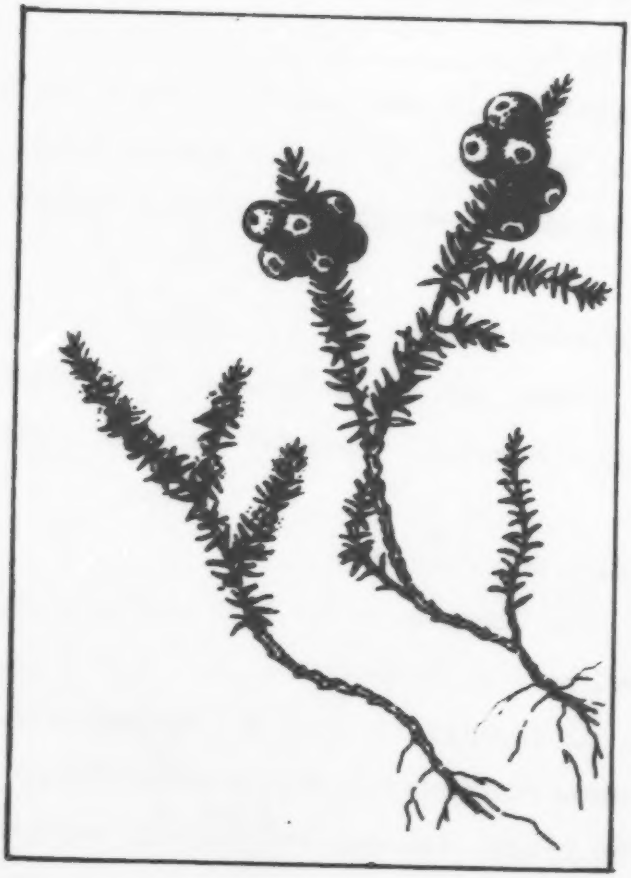
The branches are used for gold and tan dyes.

Crowberries attract grizzly bears.

VIOLACEAE Violet

The more than two hundred species of Violet in the world are all said to be edible. Violet leaves are rich in Vitamins A and C. Young leaves and flower buds are best raw in spring; they may need vinegar or spice. Leaves and flowers can be boiled as a potherb. In the southern United States, Violets are used to thicken soup and are called "wild okra." The flowers may be candied like rose petals for cake decorations and are used to flavor vinegar. Violet-leaf tea will not get bitter with long boiling as does most tea.

Empetrum nigrum Common Crowberry
Black Crowberry



Some Violet roots are said to promote vomiting. Sweet Violet seeds are used as a purgative. A syrup prepared by an infusion of fresh petals is used as a reactive or laxative. A decoction of leaves and flowers can be drunk or applied as a poultice in cases of hot swelling.

Some Violets are used in making perfume.

Viola Violet

(Lat. *Viola*: an old name used for several species of Violets by Virgil, Roman poet of the 1st century B.C.).

V. epipsila ssp. *repens* Northern Marsh Violet

ELAEGNACEAE Oleaster Family

(Gk. *elaia*: olive, and *agnos*: Chaste Tree which has similar foliage to the Oleaster. Oleaster from Lat. *olea*: olive, and *aster*: sham).

Shepherdia Buffaloberry

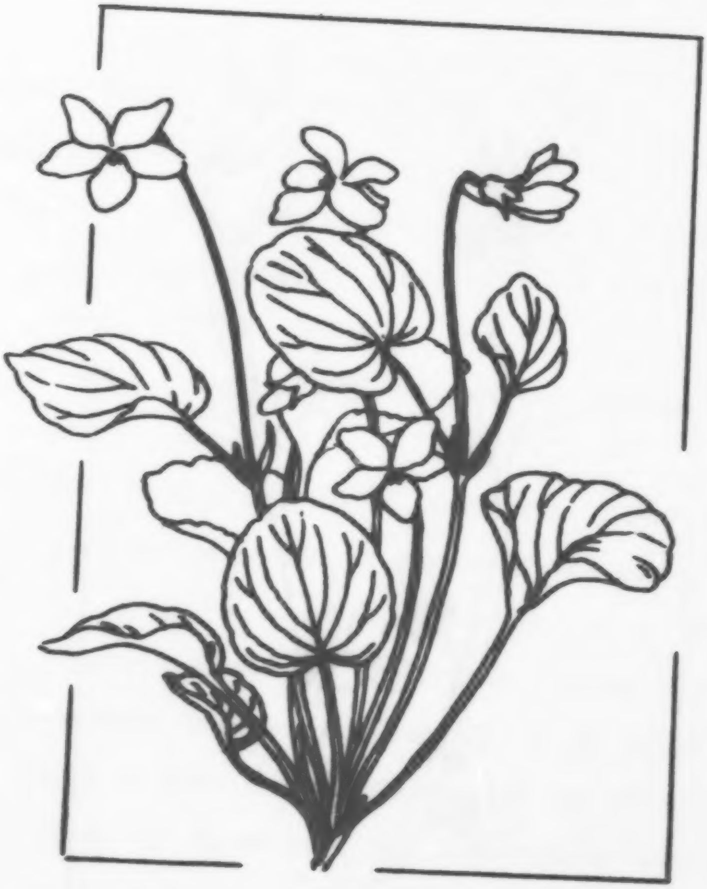
(After John Shepherd, 18-19th century curator of the Liverpool Botanic Gardens).

S. canadensis Soapberry, Soapalallie, Soopalallie, Canada Buffaloberry, Russet Buffaloberry

The bright red berries contain saponine which feels soapy to the touch. They are a favorite of many Indians, although quite bitter, astringent, or sour. Whipped with a little water and sugar until frothy, they are used on desserts like whipped cream, and as drink, or just plain as "Indian ice cream." In the past, the berries were beaten with a bundle of twigs or by hand,

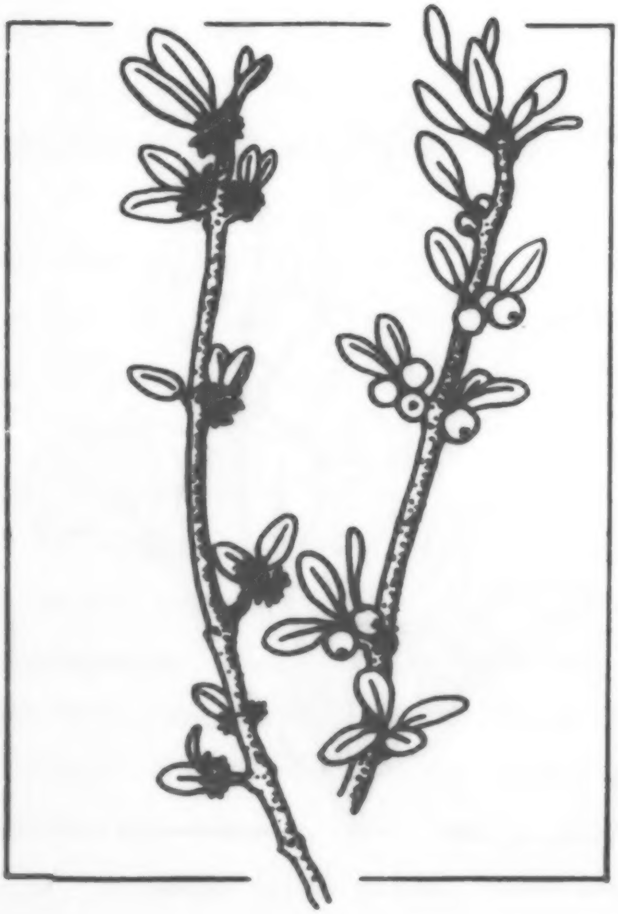
Viola epsipila

Northern Marsh Violet



Shepherdia canadensis

Soap Berry
Canadia Buffalo-Berry
Soopalallie



and sweetened with other berries. This, mixed with fish oil, was served with a special wooden spoon during ceremonies of some British Columbia Indians. It was such a treat that different groups of Indians traded for the berries.

Birds and mammals, particularly grizzly and black bears, eat the berries; Plains Bison grazed on them.

ONAGRACEAE Evening Primrose Family

Epilobium Fireweed, Willow-herb

(Gk. *epi*: upon, *lobus*: a pod, and *ion*: a violet).

E. angustifolium Fireweed, Great Willow-herb, Willow Weed, Blooming Sally

(Lat. *angustia*: narrowness, and *folium*: leaf, meaning narrow-leaved).

This showy, prevalent, and useful plant has earned its distinction as floral emblem of the Yukon. All parts of the plant are edible, and it is a good source of Vitamins A and C. The young leaves, peeled stem, and unopened buds may be used fresh in salad or cooked in soup or stew. The older leaves and flowers may be used fresh or dried for tea. The young shoots are cooked like asparagus. The stalks are split open, exposing a glutinous substance which is used to thicken soup and stew. Haida Indians of British Columbia ate the split stalks, sprinkled with sugar, like artichoke leaves at feasts.

The Haida also twisted the fibrous part of the stems into twine for fishnets. Certain patches of firewood were owned by individual tribe members. In fall, the seed-pod fluff makes good tinder or insulation.

Haida used the shoots as a laxative, not to be taken on an empty stomach. Haida women ate fireweed to purify their blood and to make themselves beautiful. The roots were grated and used in a poultice for sores.

E. latifolium River Beauty, Dwarf Fireweed, Broad-leafed Willowherb

The new shoots and young fleshy leaves of this plant are said to be superior to *E. angustifolium* as a potherb. The cooked leaves taste like spinach. The flowers and buds are also eaten, usually raw. The flowers produce yellow to green dye.

The plant is cooling and astringent and has been used to promote healing of wounds. It has also been used in dried, powdered form to stop hemorrhages.

UMBELLIFERAE Parsley, Carrot Family

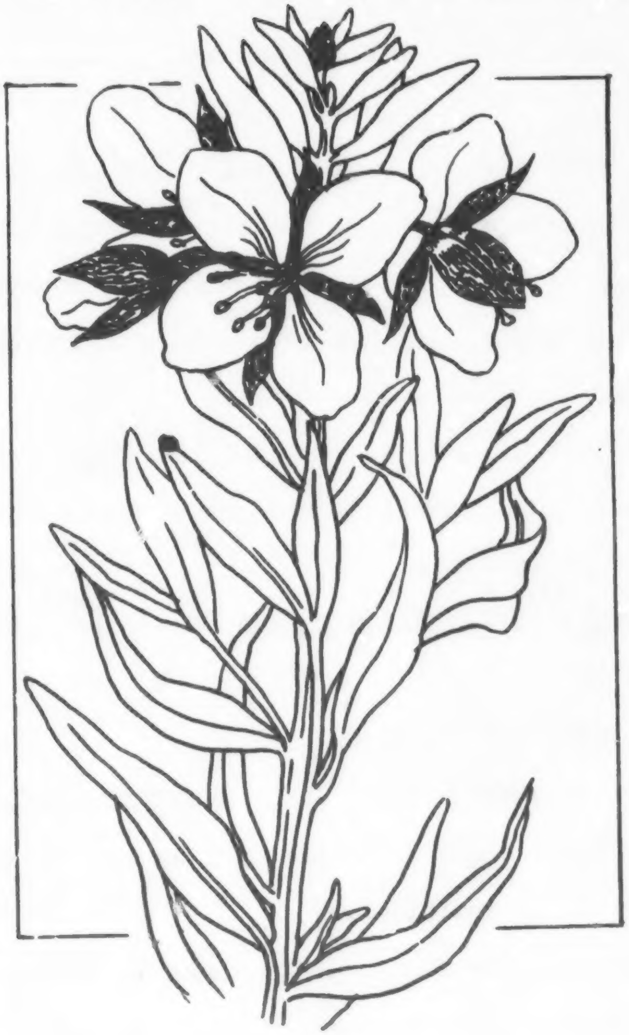
(Lat. *umbella*: sunshade, for the umbrella shaped flower heads).

Coelopleurum Angelica

(Gk. *koilos*: hollow, and *pleura*: rib, because of the hollow stems. Named from Lat. *angelica* angelic, pertaining to its medicinal properties).

The stems and petioles are eaten by natives and called wild celery. Leaves are cooked as a green vegetable or boiled

Epilobium latifolium Dwarf Fireweed, Glacier Lily



with fish, and the juicy, hollow stems are eaten raw or cooked with fish. The seeds are used to season soups and other foods. Norwegians used the crushed roots in bread.

In Siberia, the root was carried as an amulet to ward off polar bears. The Siberian Inuit inhale fumes of roasted Angelica root as a seasick remedy. Lapps chew it like tobacco.

Angelica, with its soft musky smell, has been used for many medicinal purposes; as a gastric stimulant, to relieve flatulence, to induce sweating, to promote menstruation, and as a general tonic. It has been used for indigestion, loss of appetite, spasms, colic, headaches, hysteria, neurosis, anemia, typhoid fever, bronchitis, and other chest complaints. Veterinarians consider it a good remedy for windy colic in animals.

C. gmelinnii _Angelica_ _lucida_, Sea-coast angelica, Wild Celery

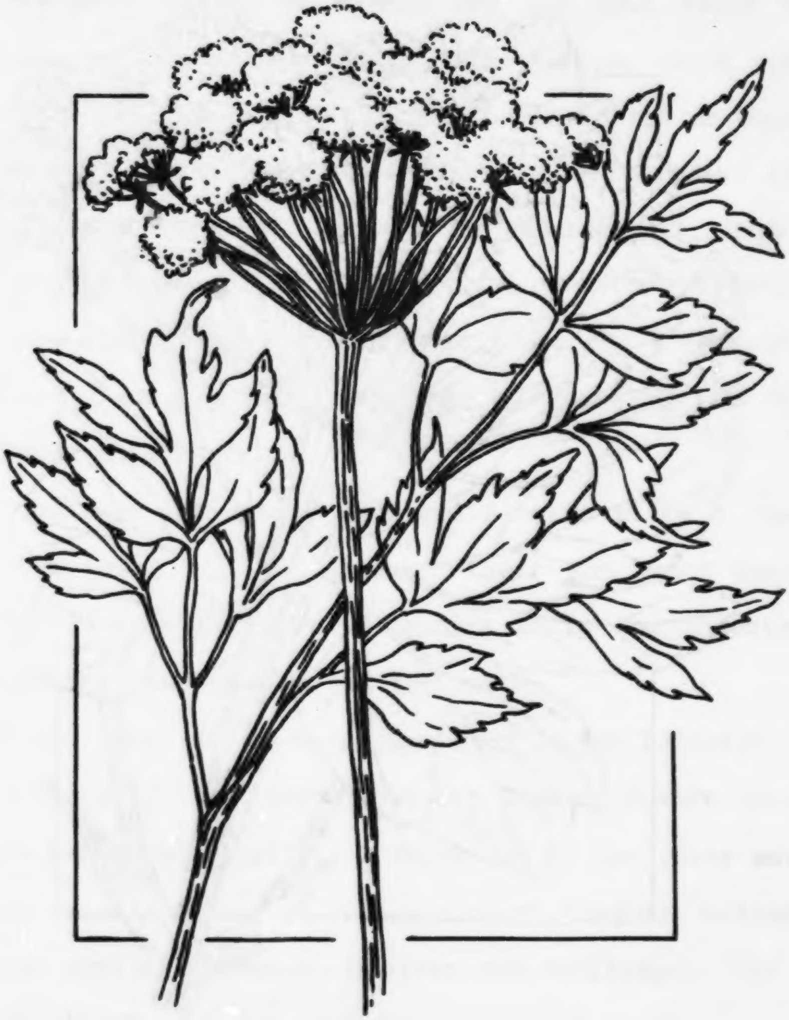
Heracleum Cow Parsnip

(After Legendary Greek hero Hercules, because of its great size, and because Hercules is said to be the first to use it in medicine).

H. lanatum Cow Parsnip, Cow Cabbage, Hercules Parsnip, Masterwort, Sand Rhubarb, Indian Celery, Wild Celery, Indian Rhubarb

(Lat. _lanatum_: woolly).

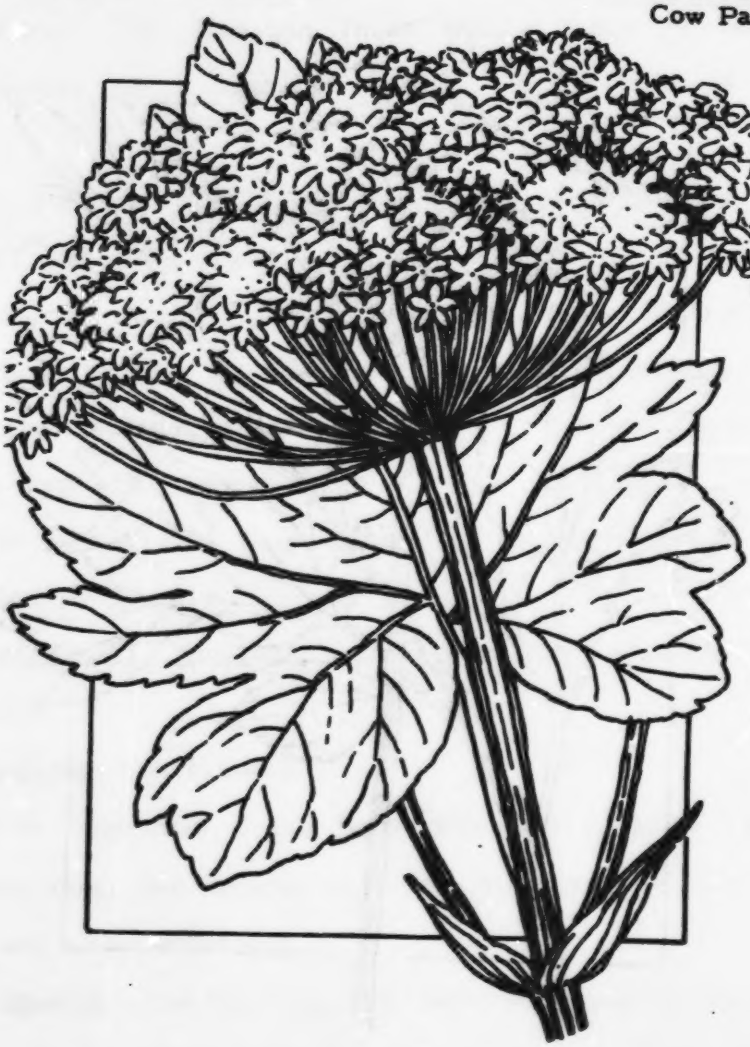
Most parts of the plant are edible, although some people consider the outer skin to be poison in that it contains



Angelica lucida **Wild Celery**

Heracleum lanatum

Wild Celery
Cow Parsnip



a chemical which sensitizes the skin to light and can cause blistered lips. In southern locations one must be careful not to mistake Water Hemlock or Poison Hemlock for it, especially in spring.

Meskwake Indians of Alaska use the root which tastes like rutabaga, as a potato. The marrow, which contains sugar and tastes like licorice is eaten raw or cooked by various Alaskan Natives. The base of the plant is said to have been used as a salt substitute. Stems are chopped and stewed like rhubarb, roasted on coals, or used like celery. The bitter juice and strong odor of the plant may be toned down by changing the cooking water once or twice.

Blackfoot Indians of southern Alberta place a stalk of this plant on the altar at their Sun Dance ceremony. The flower serves as a landing strip for insects, and several bird species eat the seeds.

Bears, deer and marmots also feed on Cow Parsnips.

Indians of the north central United States used Cow Parsnips medicinally. A decoction of the roots was used to treat rheumatism, a poultice of crushed, boiled root was applied to boils, bruises and swellings. The broth of boiled root was used for intestinal pains.

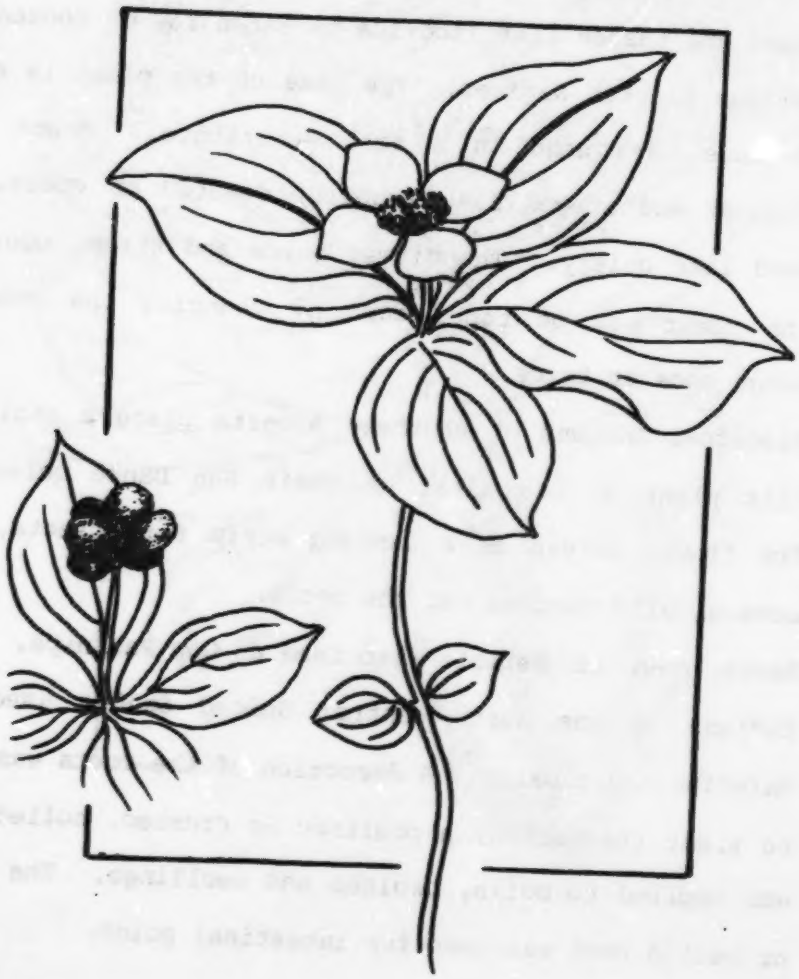
CORNACEAE Dogwood Family

Cornus Dogwood

(lat. cornu: horn, because of the hardness of the wood).

Cornus canadensis

Ground Dogwood
Bunchberry



C. canadensis Bunchberry, Dwarf Cornel, Dwarf Dogwood
The bright, attractive, red berries are edible and crunchy. They are used raw or cooked, often mixed with other berries in jams. British Columbia Indians ate the berries dipped in grease or steamed in water with grease.

Grouse and other birds feed on the berries.

The leaves of the Bunchberry are used for smoking.

PYROLACEAE Wintergreen Family

Moneses One-flowered Pyrola

(Gk. monos: single, and esis: delight).

M. uniflora One-flowered Pyrola, Shy Maiden, Wax Flower
This plant with its large white flowers is a lovely, fragrant delight to discover.

Pyrola Wintergreen

(Pyrola, the diminutive of pirus, classical name of the pear tree, because of the resemblance of the leaves of some species to pear leaves).

P. grandiflora Large-flowered Wintergreen, Arctic Wintergreen, Wild Lily of the Valley

P. secunda ssp. obtusata Nodding Wintergreen, One-sided Pyrola, One-sided Wintergreen

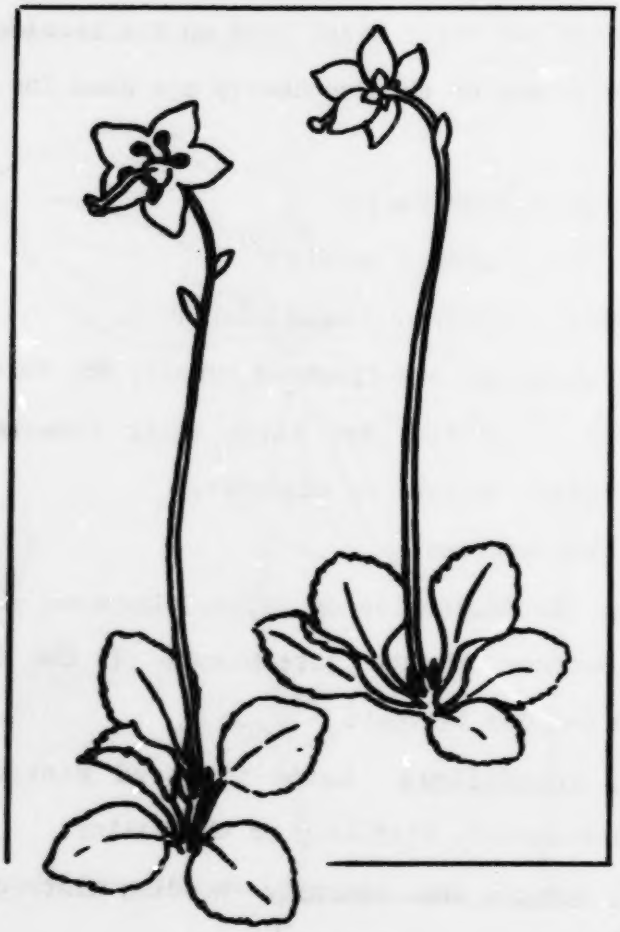
(Secunda is a botanical term meaning one-sided).

ERICACEAE Heath Family

(Gk. ereikh: the European Heath).

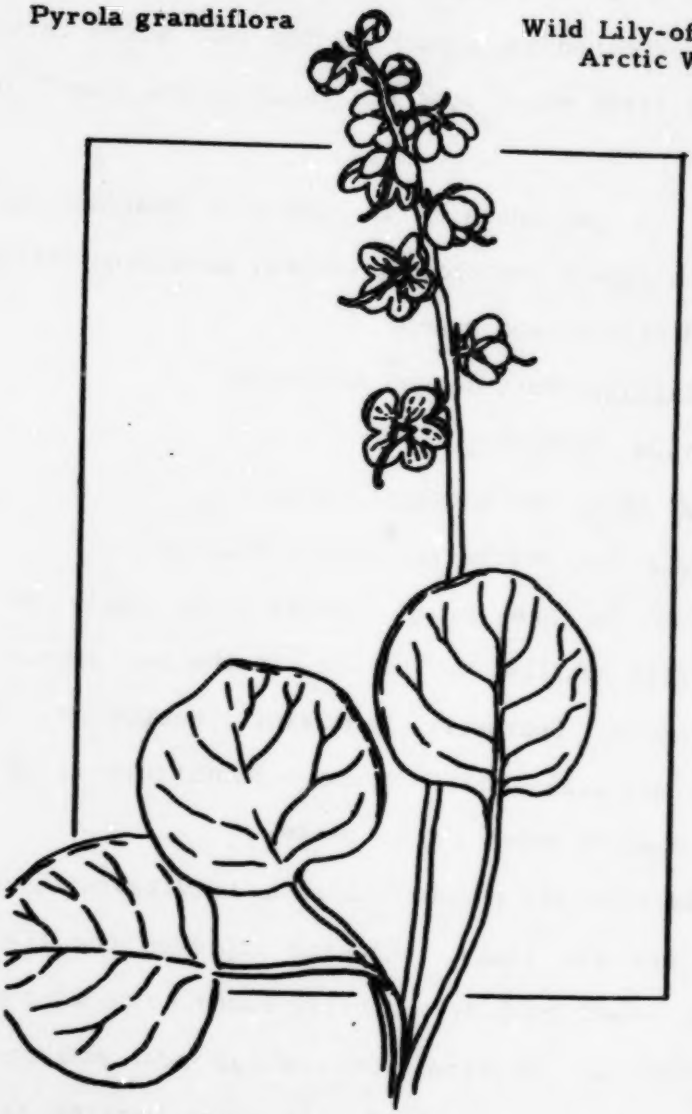
Moneses uniflora

Single Delight
Wax Flower



Pyrola grandiflora

Wild Lily-of-the-valley
Arctic Wintergreen



Andromeda Andromeda

Named for the daughter of Cassiopeia and Cepheus in Greek Mythology. Linnaeus wrote that Andromeda "is always on some turfy hillock in the midst of the swamps, as Andromeda herself was chained to a rock in the sea, which bathed her feet as the fresh water does the roots of the plant" (Clarke 1976, p. 366).

This plant is poisonous. It contains andromedotoxin, a poison which causes low blood pressure, breathing difficulty, vomiting, diarrhea, and cramps.

A. polifolia Many-leaved Andromeda

Arctostaphylos Bearberry

(Gk. *arktos*: bear, and *staphule*: grape).

A. rubra Red Bearberry, Alpine Bearberry

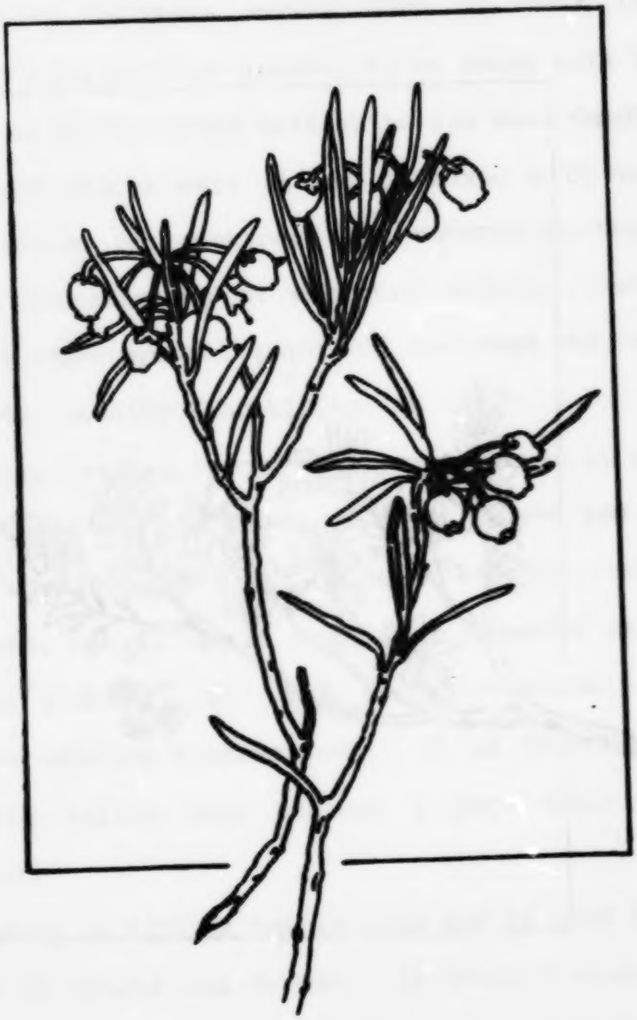
The berries are juicy, rather than mealy as in *A. uva-ursi*, but they may be used in the same ways.

A. uva-ursi Bearberry, Kinnikinik, Mealberry

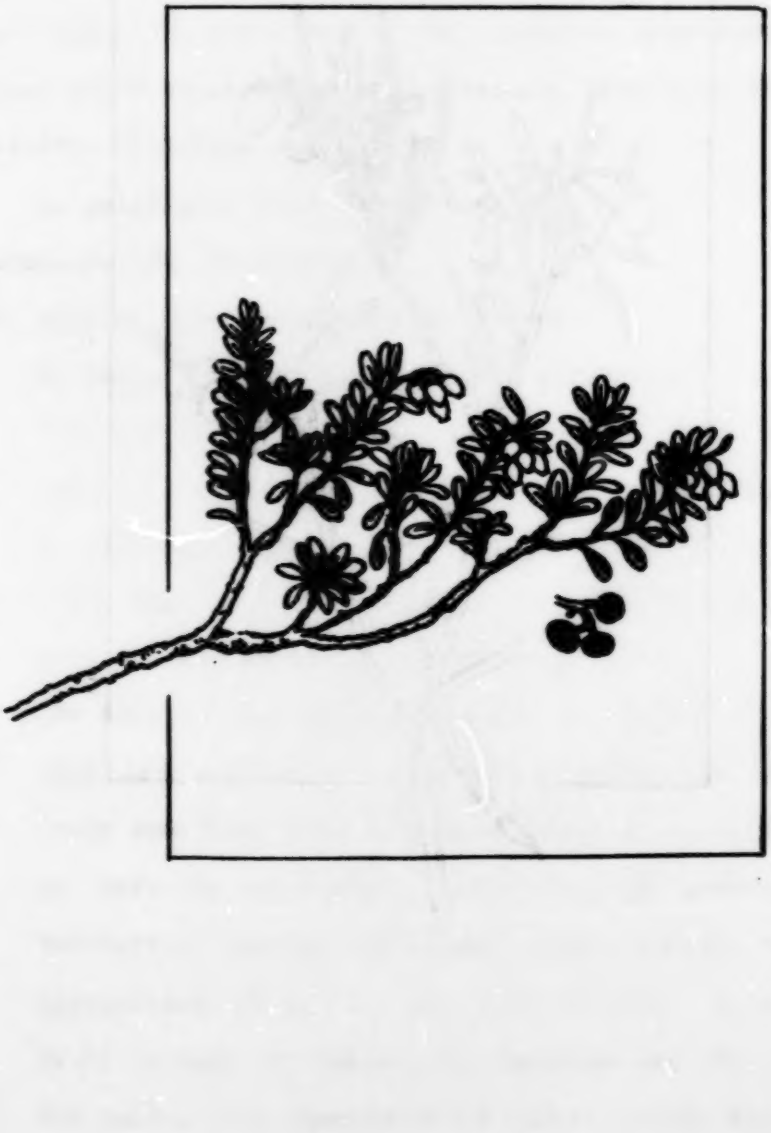
(Lat. *uva-ursi*: bear's grape. Kinnikinik is an Indian word meaning something to smoke).

The berries are edible and rich in Vitamin C, although they are not tasty. Cooking improves the flavor. A sauce something like cranberry sauce to go with meat may be made by cooking, straining, and adding sugar. Bearberries may be mixed with other berries to give a distinctive flavor to jams and jellies. A refreshing drink is made by boiling the berries and straining off the juice, then sweetening to taste. Inuit pick them

Andromeda polifolia **Bog-Rosemary**



Arctostaphylos uva-ursi **Kinnikinnick, Bearberry**



in poor berry years and mix them with blueberries or other berries. Indians used the berries to make pemmican. Pacific Coast Indians soaked them in water, fish oil, seal oil, or butter to reduce the dryness and ate them to prevent constipation. Bella Coola Indians of British Columbia served them to their chiefs at feasts in melted goat grease, to be eaten with spoons. They also boiled dried berries to use with dumplings. The dried leaves were smoked or mixed with tobacco or other leaves for smoking. The tobacco or "Kinnikinik" has an intoxicating or narcotic effect. Bella Coola Indians made special pipes of hollowed out gooseberry stems for smoking Kinnikinik.

Bearberry is used to quench thirst because it causes the flow of saliva. Tea made with the leaves has been used as a diuretic to treat kidney, bladder, and urethra diseases, but it can be harmful in cases of inflammation of the kidney. It is a strong stimulant which can produce uterine contractions. It is important to make the tea fairly weak because a pure docotion may be harmful.

Bearberry is rich in tannic acid and is used for tanning hides in Russia and Sweden. It gives a blue dye. The bright color makes it a good berry to use in Christmas decorations.

Grizzly bears and grouse feed on Kinnikinik berries.

Cassiope White Heather

(Named for Cassiopeia in Greek Mythology, wife of Cephus and mother of Andromeda).

C. tetragona Arctic Bell Heather, Arctic White Heather, Lapland Cassiope, White Mountain Heather

(_Tetragona_ describes the four-sided appearance of the stem). This is a fragrant plant which is used as an arctic fuel because of its high resin content. The branches produce a brown or golden-brown dye.

Kalmis Bog Laurel

(After Peter Kalm, 18th century Swedish explorer of North America, Knight of the Order of Vasa, and pupil of Linnaeus who named the plant after his disciple).

K. polifolia Pale Laurel, Mountain Laurel, Swamp Laurel, Bog Laurel

(Lat. _poli_: many, and _folium_: leaf).

The leaves contain a poison, andromedotoxin, which is toxic to livestock, especially domestic sheep.

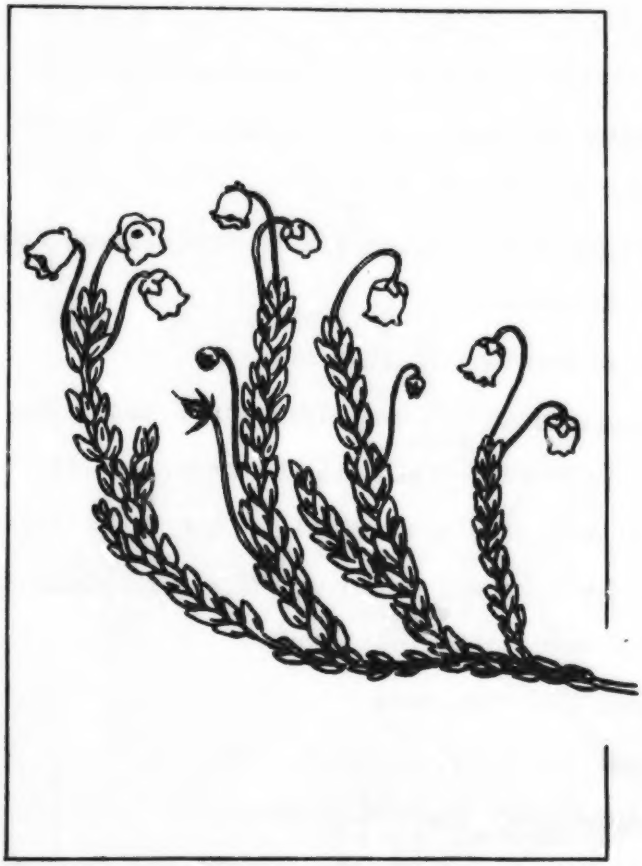
The leaves produce yellow and gray dye.

Ledum Labrador Tea

(Gk. _ledon_: matrix, ancient name of a rock plant called Cistus-ledum, whose foliage resembles that of Ledum).

These plants contain ledol, a poisonous substance causing cramps and paralysis. However, the leaves are used to make tea and have a high Vitamin C content, although they have narcotic properties. Slave Indians of Ft. Nelson, British Columbia used the flowers for tea. Okanagan Indians used entire branch tips to make tea.

Cassiope tetragona Arctic Bell Heather



Indians extracted oil from the leaves for tanning leather or skins.

Coastal British Columbia Indians used the tea as medicine for colds and sore throats. It has been used for nervous disorders and scurvy, to promote digestion, increase appetite, and relieve dysentery. A lotion to relieve the sting and itch of mosquito bites can be prepared from Ledum. Interior British Columbia Shushwap Indians used Ledum groenlandicum as medicine to counteract poison ivy, heart disease, and childbirth pain.

L. palustre ssp. decumbens Narrow-leaved Labrador Tea

Oxycoccus Cranberry

(Gk. oxus: sharp, and kokkus: seed).

O. microcarpus Swamp Cranberry, Small Bog Cranberry, Small Cranberry (Microcarpus means fruit).

The cranberries are delicious but generally more sparse than the Mountain Cranberry Vaccinium vitis-idaea. They may be used in the same way.

Rhododendron Rhododendron

(Gk. rhodos: rose, and dendron: tree).

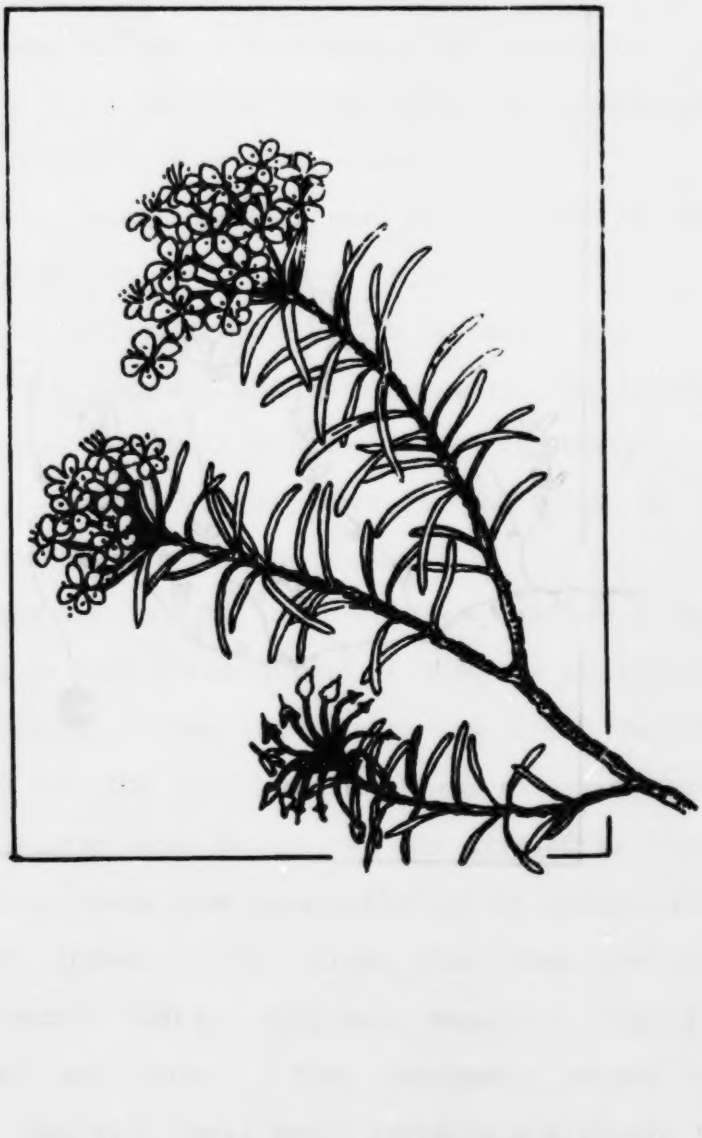
R. lapponicum Lapland Rosebay

The leaves give a strong, bright yellow dye, as well as green, brown, and orange. The branches produce gold, rose, and tan dyes.

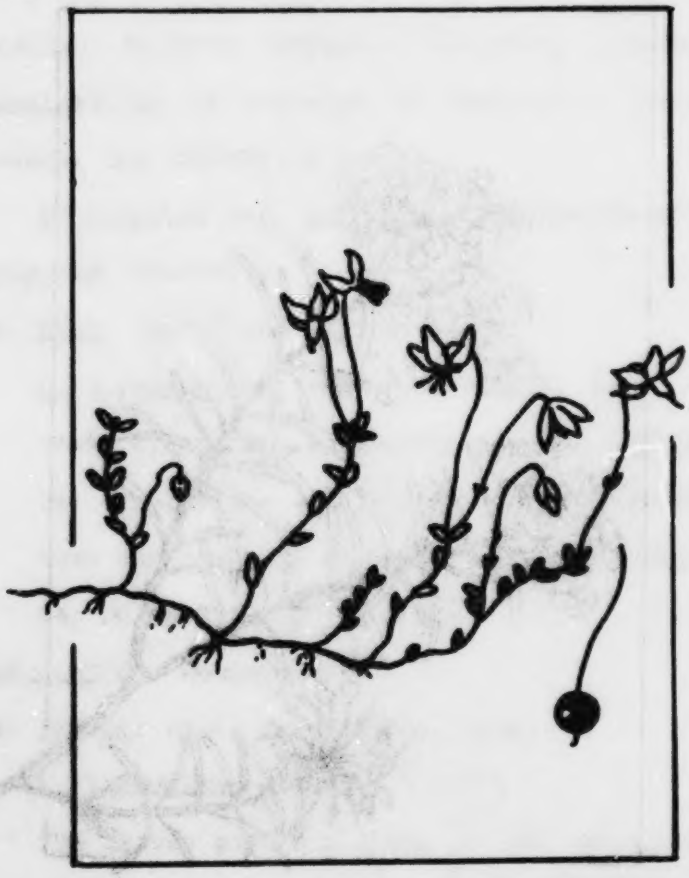
Vaccinium

(Lat. vacca: cow, the classical Latin Vaccinium being a berried shrub which was browsed by cattle).

Ledum palustre **Narrow-leaved Labrador Tea**



Oxycoccus microcarpus **Swamp Cranberry**



All Vaccinium species seem to produce good country wines. They provide a source of Vitamins A, B, C, and traces of calcium, phosphorous, and iron.

V. uliginosum Alpine Blueberry, Bilberry, Bog Blueberry, Bog Buckleberry, Whortleberry

The sweet berries are eaten fresh or dried, and make excellent jam, pie, pudding, and muffins. They may be frozen and are a fair source of Vitamin C.. They make good fruit leather. Great Slave Lake people boiled them in grease to store for winter.

Bears, small animals and birds feast on the Alpine Blueberries.

These berries produce a pink or purple dye.

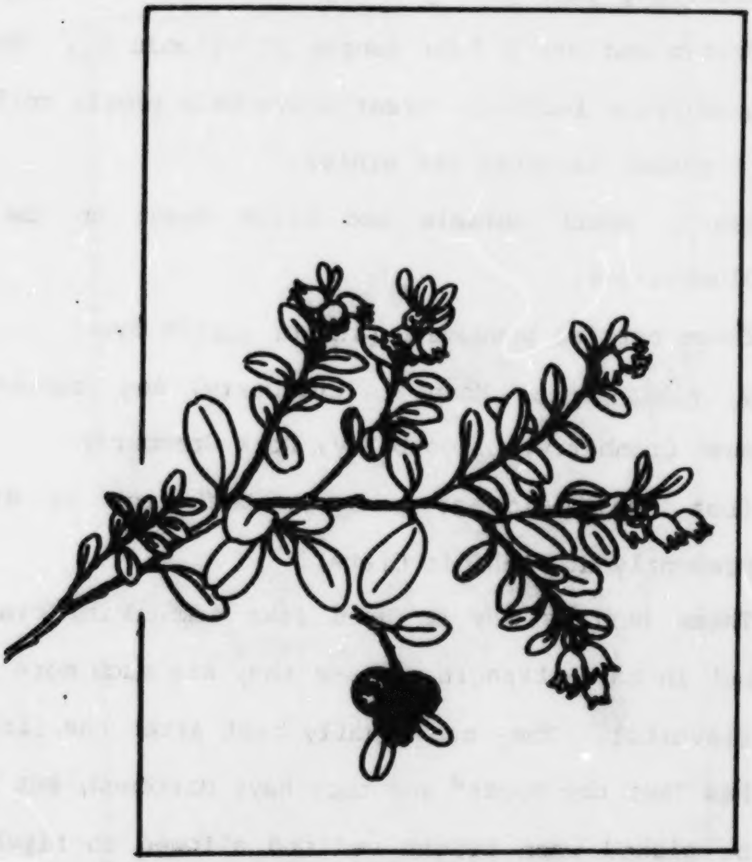
V. vitis-idaea Mountain Cranberry, Bog Cranberry, Low Bush Cranberry, Lingonberry, Rock Cranberry

(Lat. vitis-idaea: meaning the vine of Mt. Ida, presently Mt. Idhi in Crete).

These berries may be used like commercial cranberries but in half-strength because they are much more tart and flavorful. They are usually best after the first frost has "set the sugar" and they have darkened, but they may be picked when bright red and allowed to ripen. Some people think them more delicious in spring after having been frozen on the vines, when they have a slightly fermented taste. They make excellent cranberry sauce, jam, and juice. They complement almost any other berries with their extra tartness and pectin to aid in

Vaccinium vitis-idaea

Mountain Cranberry
Low-bush Cranberry
Lingonberry



jelling. Miska Indians of Interior British Columbia mixed them with snow and whipped the mix to a froth with grease for a type of desert. In Finland, a famous liquor is made from the berry.

The branches and leaves give gold or rose-tan dye.

The fruits, being high in Vitamin C, are effective against scurvy.

PRIMULACEAE Primrose Family

Androsace

(Gk. *androsakes*: name of a now unknown sea plant).

A. chamaejasme Rock Jasmine, Sweet-flowered Androsace, Grass-leaved Androsace

(Gk. *chamae*: low)

The flowers are sweet-scented.

Primula Primrose

(Lat. *primus*: first, because of its early flowering).

P. egaliksensis Greenland Primrose

P. mistassinica Bird's Eye Primrose, Dwarf Canadian Primrose

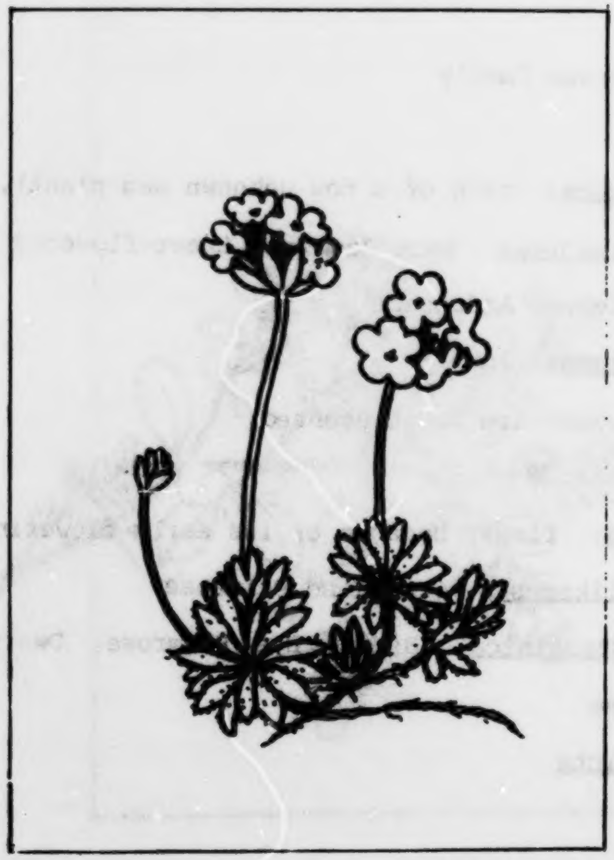
P. stricta

GENTIANACEAE Gentian Family

(Named for Gentius, 1st century King of Illyria, who discovered the tonic properties of these herbs, according to Pliny the Elder).

Even before the 16th century, medicinal tonics and cleansers were

Androsace chamaejasme **Rock Jasmine**



made from Gentian. The root is used to dispel fever, and to treat indigestion, jaundice, fluid accumulation, skin diseases, and gout. It is made into many forms; powder, tea, syrup, tincture, extract, and wine. Gentian flowers were also used in medicine.

Gentiana Gentian

G. glauca Glaucous Gentian, Smooth Alpine Gentian

G. propinqua Arctic Gentian, Four-parted Gentian

G. prostrata Moss Gentian

The blossom opens only in bright sunshine, and closes even when a cloud passes over the sun.

Lomatogonium Star Gentian

(Gk. *loma*: border, and *gonia*: angle, referring to star-shaped blossoms).

L. rotatum Marsh Felwort, Star Gentian.

POLEMONIACEAE Phlox Family

Polemonium Jacob's Ladder

(Gk. *polomos*: war, name used by Dioscorides, Jacob's Ladder refers to the ladder-like arrangement of leaflets).

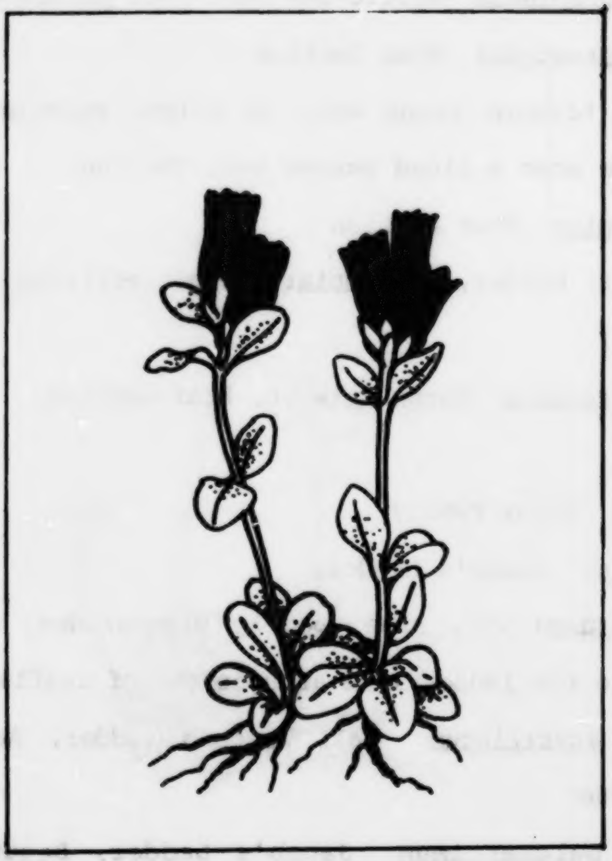
P. acutiflorum Tall Jacob's Ladder, Acutish Jacob's Ladder

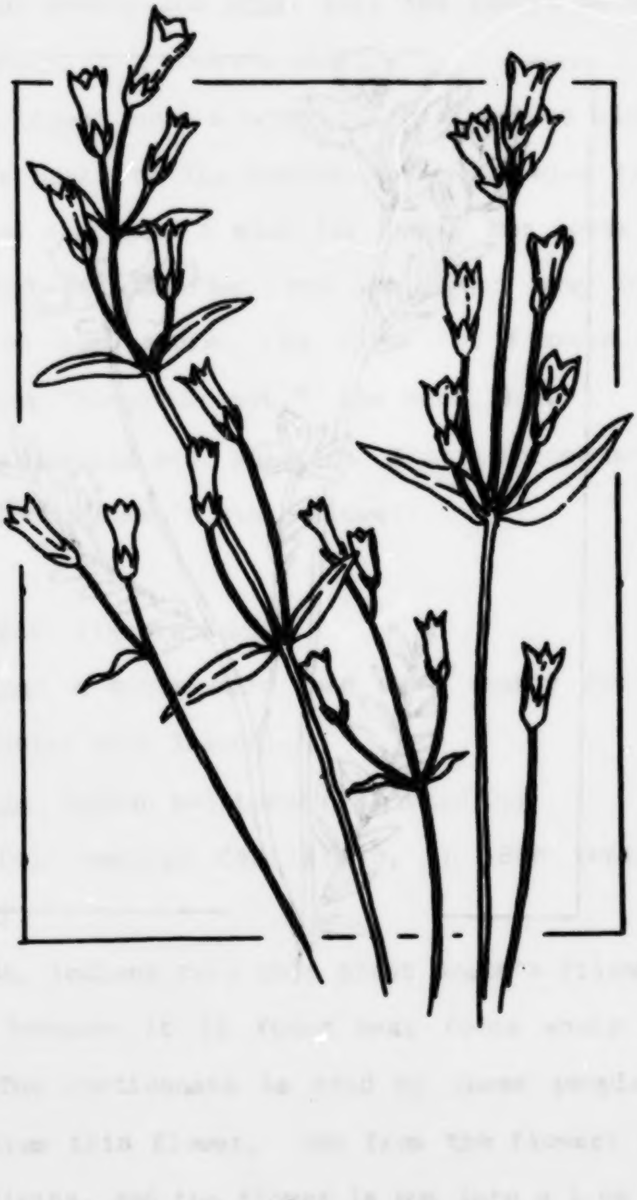
P. pulcherrimum Jacob's Ladder, Beautiful Jacob's Ladder

BORAGINACEAE Borage Family

(Lat. *burra*: shaggy hair, most plants being hairy on leaves and stems.

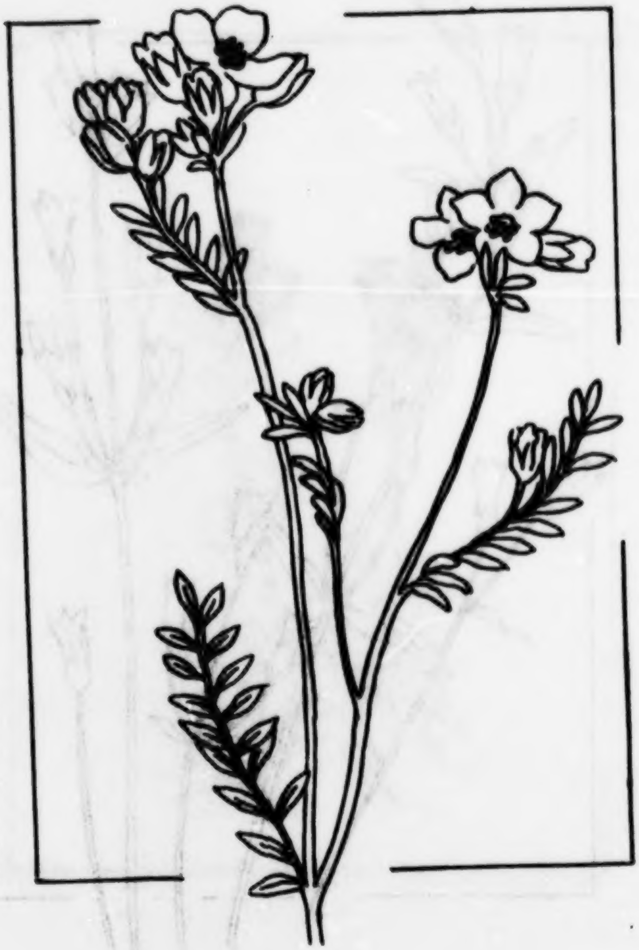
Gentiana glauca **Glaucous Gentian**





Gentiana propinqua **Four-parted Gentian**

Polemonium acutiflorum **Jacob's Ladder**



Mertensia Lungwort

After F.K. Mertens, a German botanist of the 18-19th centuries.

M. paniculata Bluebells, Chiming Bells, Tall Lungwort

Myostis Forget-me-not

(Gk. mus: mouse, and otos: ear, the leaves of some species being similar to a mouse's ear).

A German legend says a beautiful girl walked with her lover along the banks of the Danube. She saw blue flowers on an island and expressed a wish for them. Her lover swam to the island and picked some, but was swept away by the swift current on his return. He threw the flowers at her feet calling out "Forget-me-not." She never did.

M. alpestris ssp. asiatica Alpine Forget-me-not

This is Alaska's State Flower.

SCROPHULARIACEAE Figwort Family

(Lat. scrofulae: a genus once used as a remedy for scrofula, a type of tubercular skin lesion).

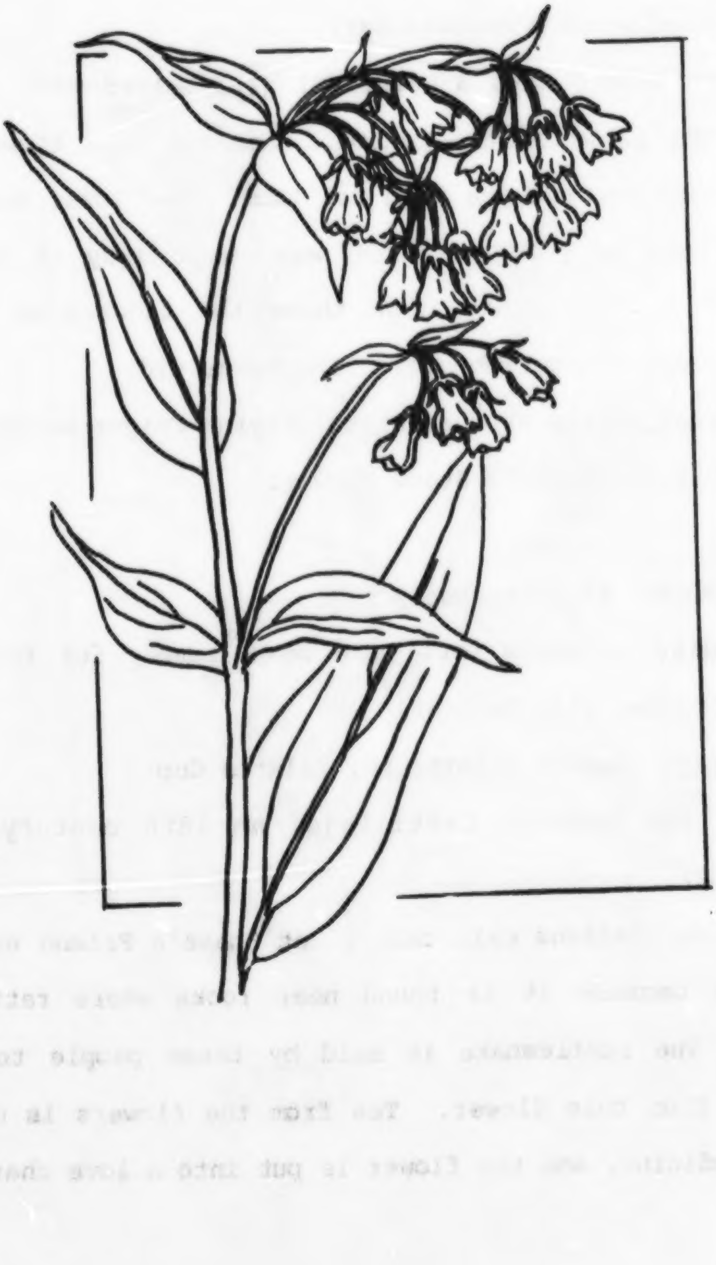
Castilleja Indian Paintbrush, Painted Cup

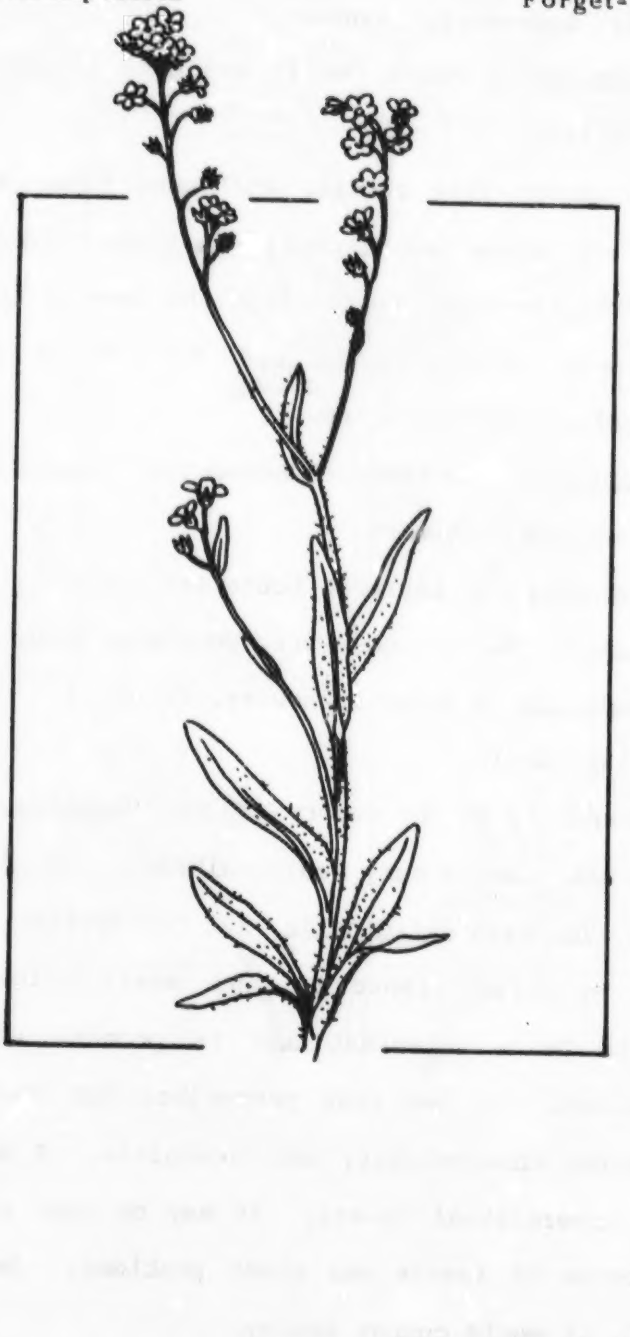
(After Don Domingo Castillejo, an 18th century Spanish botanist).

In Nevada, Indians call this plant Snake's Friend or Snake's Matches because it is found near rocks where rattlesnakes lurk. The rattlesnake is said by these people to distill poison from this flower. Tea from the flowers is used as a love medicine, and the flower is put into a love charm.

Mertensia paniculata

Tall Lungwort
Bluebells
Chiming Bells





Myosotis alpestris

Forget-me-not

Castilleja sp.

Lagotis

(Gk. *lagos*: hare).

L. stelleri Weasel-snout

Pedicularis Lousewort, Fernweed

(Lat. *pediculos*: a louse, as it was once thought to infest cattle with lice).

The roots, carrot-like shoots, and young flowering stems of lousewort are eaten raw or cooked in soup. Eskimo children and bees suck the sweet nectar from the base of the flower. Dried flower stalks are used for olive green dye.

P. arctica Arctic Lousewort

P. capitata Few-flowered Lousewort, Capitate Lousewort, Head-shaped Lousewort

P. labradorica Labrador Lousewort

P. lanata Woolly Lousewort, Bumblebee Plant

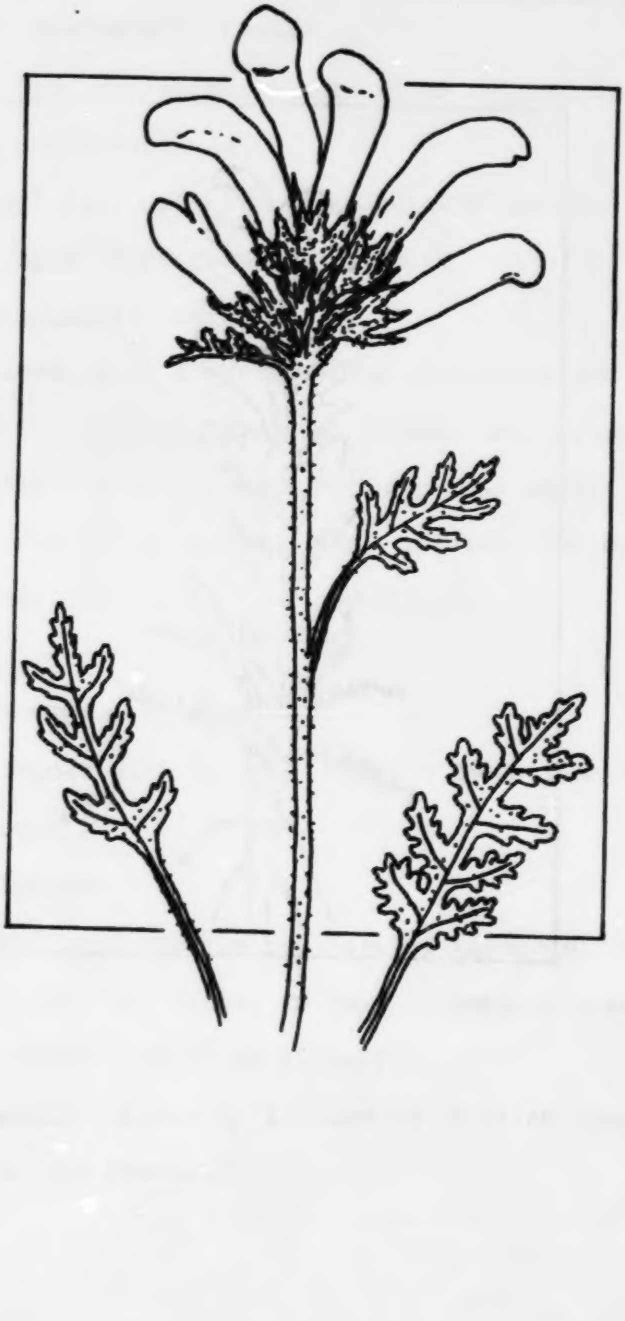
P. sudetica Sudetan Lousewort, Fernweed

Veronica Speedwell

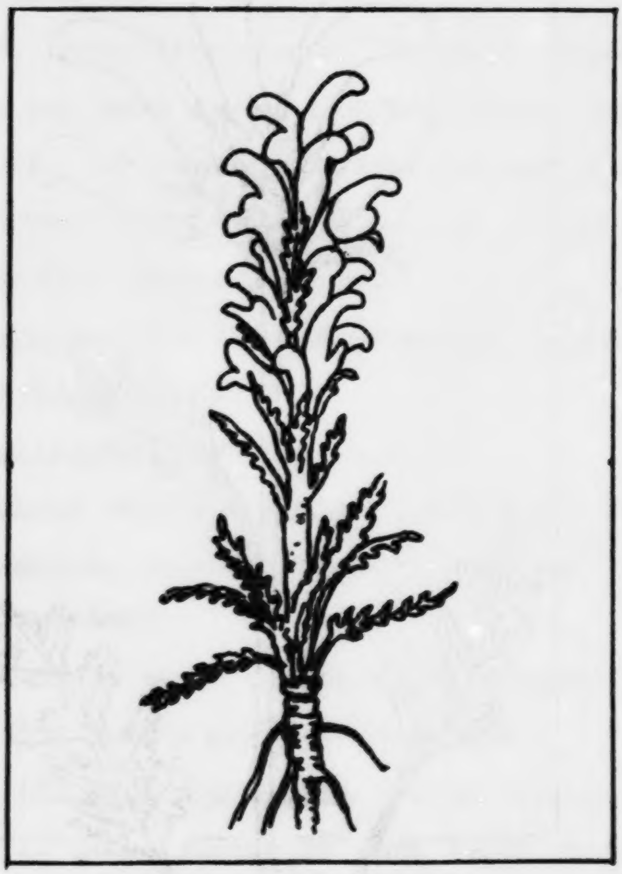
(Name thought to be in memory of St. Veronica. Speedwell refers to the plant's many medicinal uses).

Speedwell (*Veronica officinalis*, not the species found here), was said by Johan Franke to cure every illness. It is thought to be a stimulant and to promote urination and expectoration. It has been prescribed for chest diseases, inflammation, tuberculosis, and bronchitis. A decoction was used for intermittent fevers. It may be used as a tonic in convalescence of fevers and chest problems. Being high in Vitamin C, it would combat scurvy.

Pedicularis capitata **Capitate Lousewort**



Pedicularis lanata **Woolly Lousewort**



Veronica americana may be used like watercress as a salad plant, and this is probably true of all the species of Veronica.

V. wormskjoldii Alpine Speedwell

LENTIBULARIACEAE Bladderwort Family

The bladderworts are carnivorous plants which consume insects.

Pinguicula Butterwort

(Lat. pinguis: fat, describing the buttery foliage).

P. vulgaris Butterwort, Bog Violet

(Lat. vulgaris: common).

The leaves have a mucilagenous secretion and rolled-in edge which attract, ensnare, digest, and funnel insects, supplying the plant with nitrogen and other nutrients. The leaves also digest seed, pollen, and other small organisms with their acid secretions.

CAPRIFOLIACEAE Honeysuckle Family

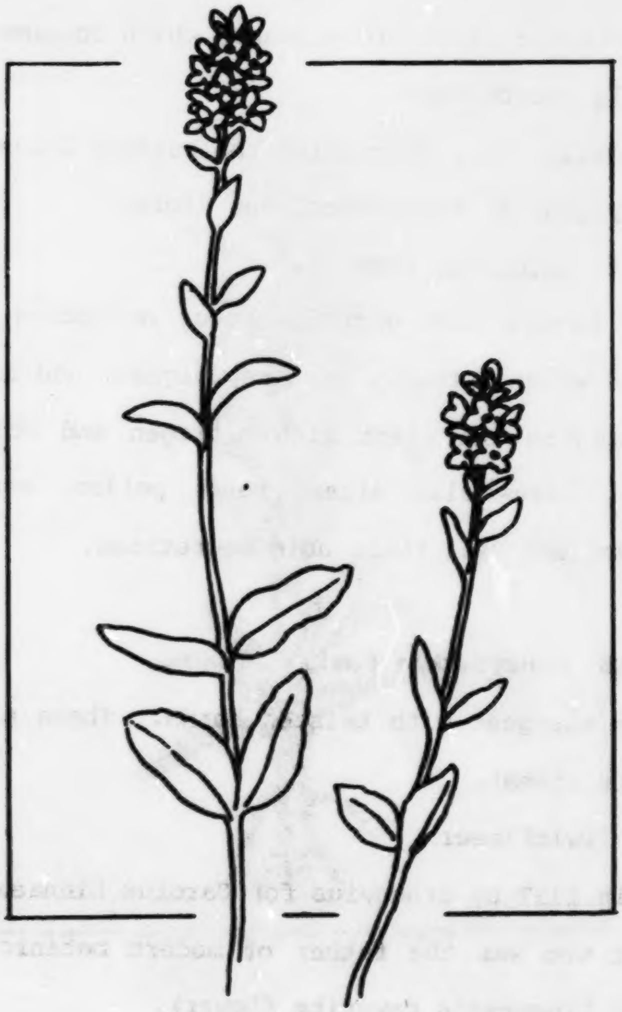
(Lat. Caprea: she-goat with twisted horns. These plants climb by twisting their stems).

Linnaea Twinflower

(Named in 1737 by Gronovius for Carolus Linnaeus, the Swedish botanist who was the father of modern botanic nomenclature. This was Linnaeus's favorite flower).

L. borealis Kootenay Indians of British Columbia make tea from the leaves.

Veronica wormskjoldii **Alpine Speedwell**



VALERIANACEAE Valerian Family

Valeriana Valerian

(After the Roman Valerius who first used a tincture of roots in medicine, or from Lat. *valere*: to be in health).

V. capitata Wild Heliotrope, Capitate Valerian

V. sitchensis Wild Heliotrope, Mountain Heliotrope, Sitka Valerian.

(First collected at Sitka).

The thick rootstalk is used by Plains Indians as food and as a medicine for stomach ailments. This plant was sometimes used by Blackfoot Indians in a tobacco mixture.

CAMPANULACEAE Bluebell Family

Campanula Bellflower

(Diminutive of Lat. *campana*: bell).

C. aurita Bellflower, Harebell, Bluebell

COMPOSITAE Sunflower Family

(Lat. *componens*: to put together).

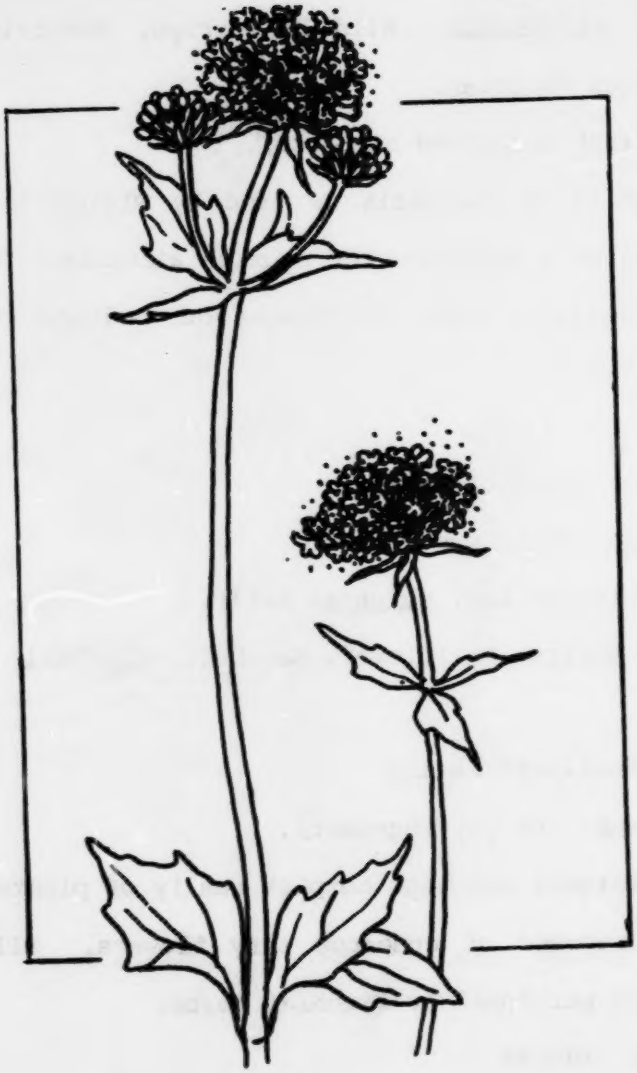
This is the largest and most complex family of plants, each flower head being composed of numerous tiny flowers. All the species found here are perennial or biennial herbs.

Achillea Yarrow

(In honor of Achilles, the Greek warrior, who is said to have made an ointment from Yarrow to heal the wounds of his soldiers. Yarrow is a Scottish name, after a parish by the Yarrow River).

Valeriana capitata

Capitate Valerian
Wild Heliotrope



Various species of Yarrow (not found here) have been used as tonics, cure for stomach disorders, and poultices. One species is said to be toxic to livestock.

A. nigrescens Yarrow, Millfoil

Antennaria Everlasting, Pussy Toes

(The bristly crown is likened to insect antennae. It is called Everlasting because the dried flower can be kept through winter. The head does resemble a cat's toes).

A. isolepis Everlasting, Pussy Toes

A. monocephala Single-headed Cat's Paw

A. pulcherrima Showy Everlasting, Pussy Toes

Arnica Mountain Tobacco

(Gk. arnakis: lamb's skin, because the involucral bracts are often woolly).

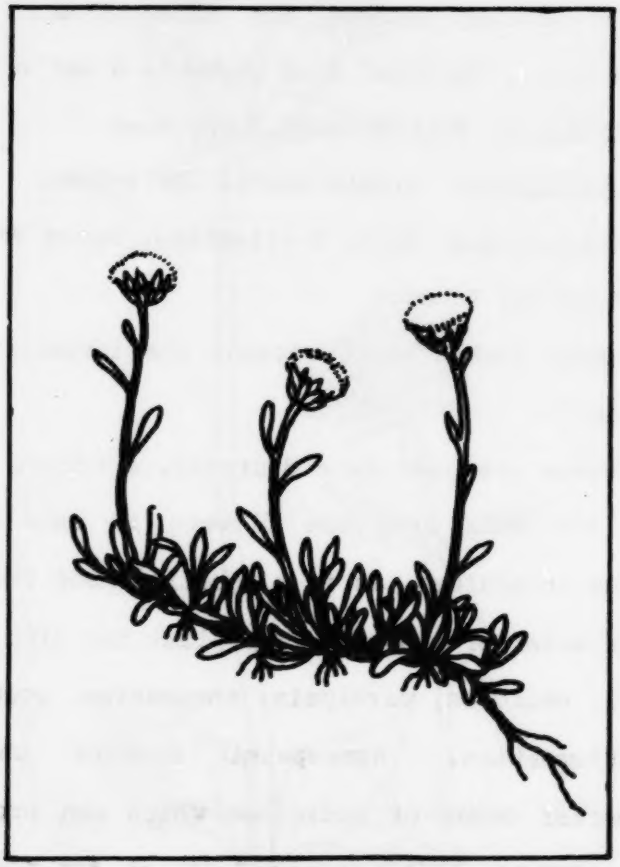
Arnica leaves are used as a diuretic, a tonic, and to dispel fever. Tea made from the flowers is said to help heal contusions or bruises, as is a poultice made from the flowers boiled in water or vinegar. The plant has also been used for dysentery, neuroses, paralysis, rheumatism, gout, asthma, and lung inflammation. Homeopathic doctors, who treat with infinitesimal doses of medicines which can produce symptoms like the disease being treated, use it for pneumonia, acute rheumatism, and apoplexy.

A. alpina ssp. angustifolia Alpine Arnica, Mountain Tobacco

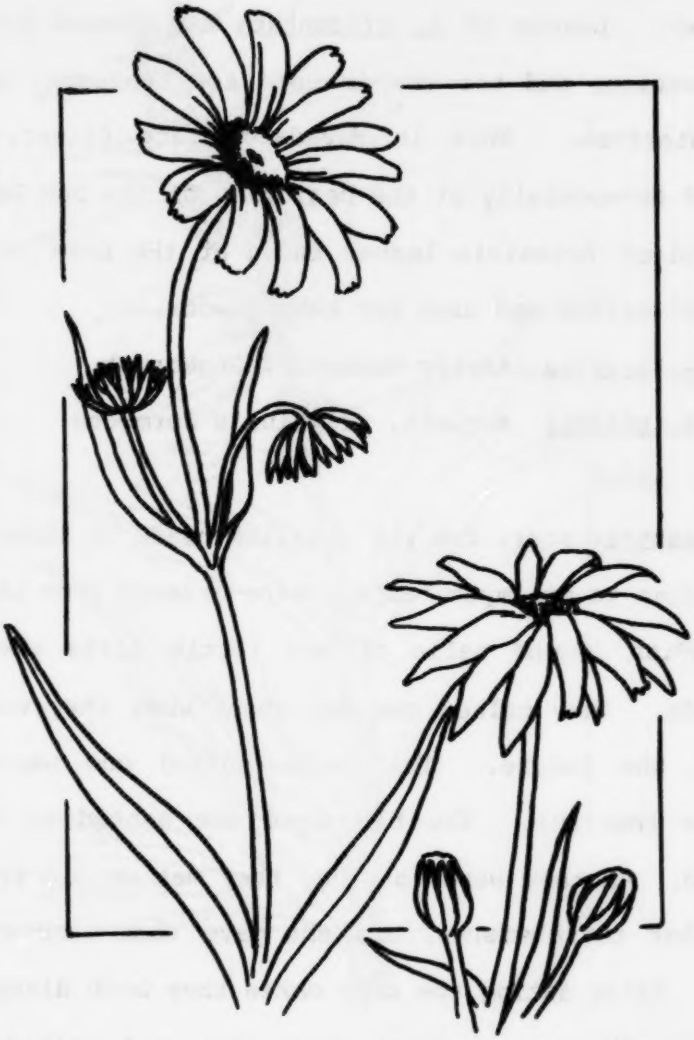
Artemisia Sagebrush, Wormwood

(After Artemisia, wife of Mausolus, king of Caria in Asia

Antennaria monocephala **Cat's-paw**



Arnica alpina **Alpine Arnica**



Minor. Mausolus is said to have used the plant. Herodotus acclaimed Artemisia in his *Histories* of the 5th Century B.C. for aiding Xerxes in the Persian campaign against Greece). Various species of Artemisia (not found here) have many medicinal uses, as a tonic, antispasmodic, stimulant, and eyewash. Leaves of *A. tridentata* are chewed for relief of indigestion, and the tea is used for headache, stomachache, and diarrhea. This is Nevada's state flower, and it is burned ceremonially at the beginning of the Sun Dance. Old, black Artemisia leaves found at the base of the plants are pulverized and used for baby powder.

A. arctica Arctic Wormwood, Sagebrush

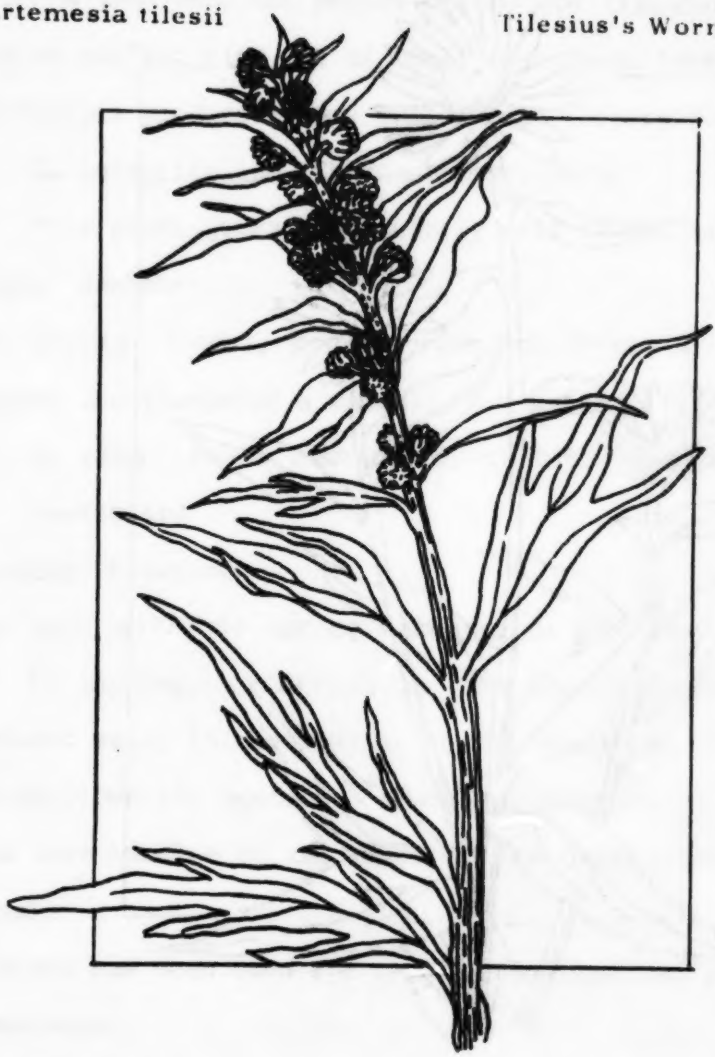
A. tilesii Mugwort, Tilesius's Wormwood

Aster Aster

(Gk. *astere*: star, for the starlike heads of flowers). According to one myth, asters were created from stardust. An Indian legend tells of two little girls who were good friends. They talked one day about what they would like to do in the future. The golden-haired one wanted to make people cheerful. The blue-eyed one wanted to be with her friend. As they were talking, they met an old Indian woman, told her their wishes, and she gave them each a magic corn cake. After eating the corn cakes they both disappeared, but two new flowers appeared where they had walked: Aster and Goldenrod.

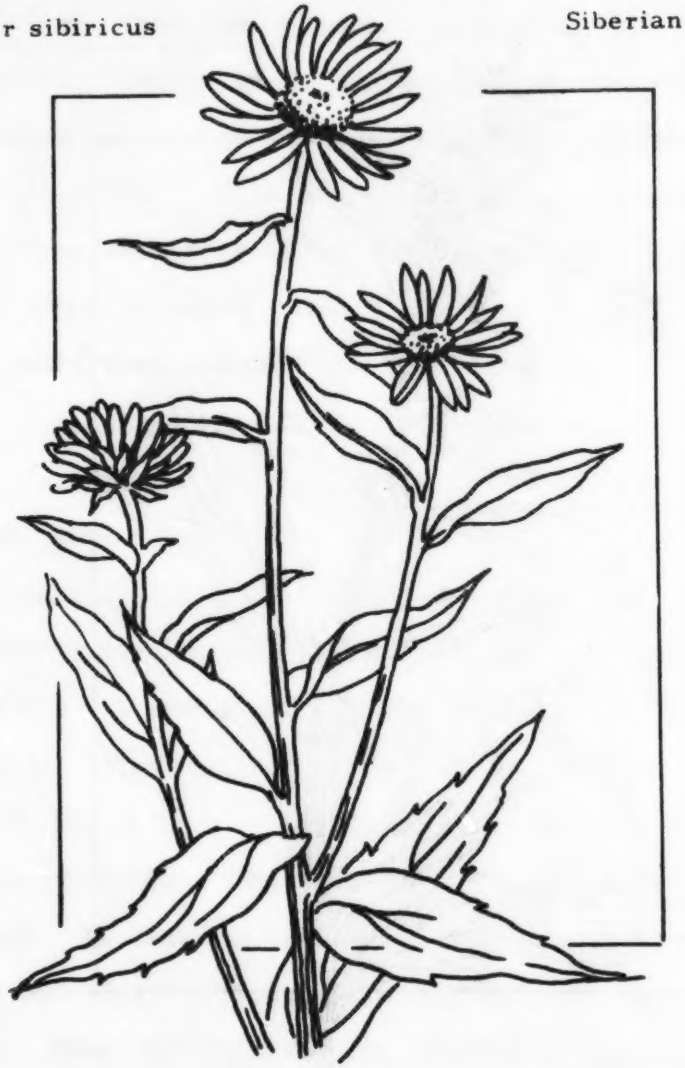
A. alpinus

A. sibiricus



Artemesia tilesii **Tilesius's Wormwood**

Aster sibiricus **Siberian Aster**



Chrysanthemum Daisy

(Gk. *chrusos*: gold, and *anthemon*: a flower. Daisy comes from the Anglo-Saxon *daeges*: day's, and *eage*: eye, referring to the yellow center as the sun, or "eye of the day").

Children pick off the petals one by one (reciting "Love me, Love me not")to find out if their sweetheart loves them.

The flowers produce cream, yellow, and chartreuse dye.

C. integrifolium Chrysanthemum, Daisy

This plant grows particularly well in solifluction soil.

Crepis Hawksbeard

(Gk. *krepis*: sandal, perhaps from the deep cut leaves which suggest the thongs of a sandal).

C. nana Dwarf Hawksbeard, Cushion Hawksbeard, Alpine Hawksbeard

Erigeron Fleabane

(Gk. *eri*: early or spring, and *geron*: old man, meaning old man in spring, referring to the hair-tufted seed-heads produced early in the year or to the hoariness of some of the spring-flowering species. The name Fleabane comes from the idea that bundles of the plant in the house would discourage fleas).

Fleabane has been used for chronic diarrhea and parturitional hemmorhage.

E. elatus

E. humilis

E. hyssopifolius

E. purpuratus

Petasites Sweet Coltsfoot

(Gk. *petasos*: broad-brimmed hat, alluding to the large leaves).

P. frigidus Sweet Coltsfoot

The young leaves and flowers may be used raw as salad or cooked as a potherb. The dry stems and leaves are used as a salt substitute. They are dried, rolled into tight balls, and reduced to ashen consistency over coals, or fired while encased in balls of clay.

Saussurea

(After Horace Benedict de Saussure, 18th century Swiss botanist, geologist, and early alpinist).

S. angustifolia Narrow-leaved Saussurea

Senecio Groundsel

(Lat. *senex*: old man, either because of the white, hair-like crown, or because the receptacle or top of the flower stalk has no bristles or hairs and is like a bald head).

Some species are considered poisonous and many have medicinal properties. Some 1300 species exist throughout the world.

S. atropurpureus Groundsel, Arctic Senecio

S. cymbalaria Mignonette-leaved Groundsel

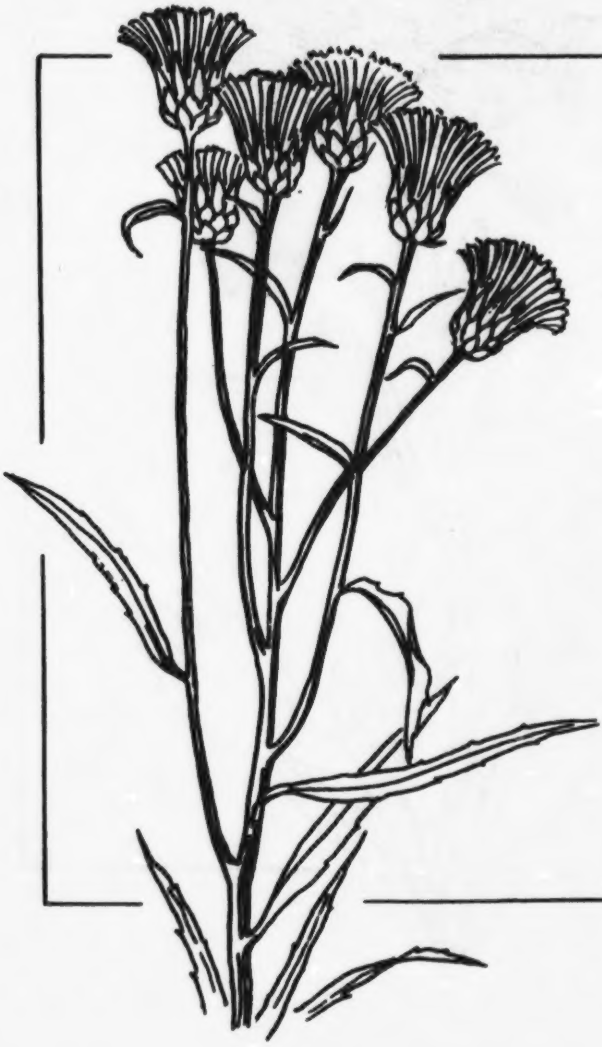
S. kjellmanii Arctic Senecio

S. lugens Black-tipped Groundsel

(Lugens means sorrowful. The type specimen comes from Bloody Falls on Coppermine River, where a slaughter took place).

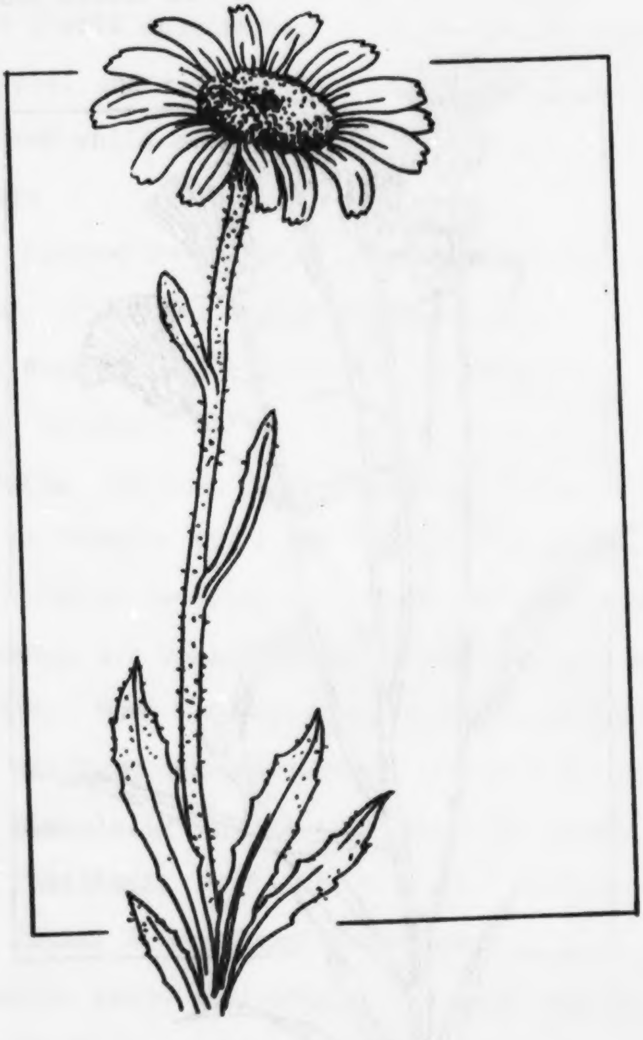
S. triangularis Triangular-leaved Ragwort, Giant Ragwort, Brook Ragwort

Saussurea angustifolia Narrow-leaved Saussurea

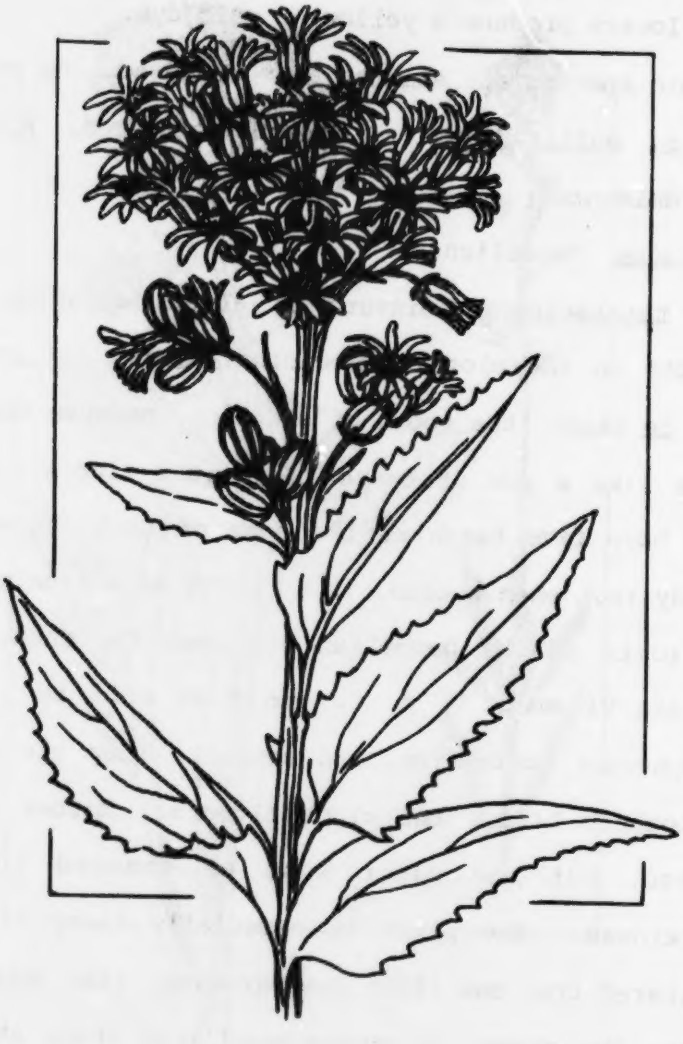


Senecio atropurpureus

Arctic Senecio



Senecio triangularis



Solidago Goldenrod

(Lat. solidus: whole, and ago: to make. To make whole refers to the curative values once attributed to Goldenrod).

Tea may be made of the dried leaves and blossoms of some species.

The flowers produce a yellow or gold dye.

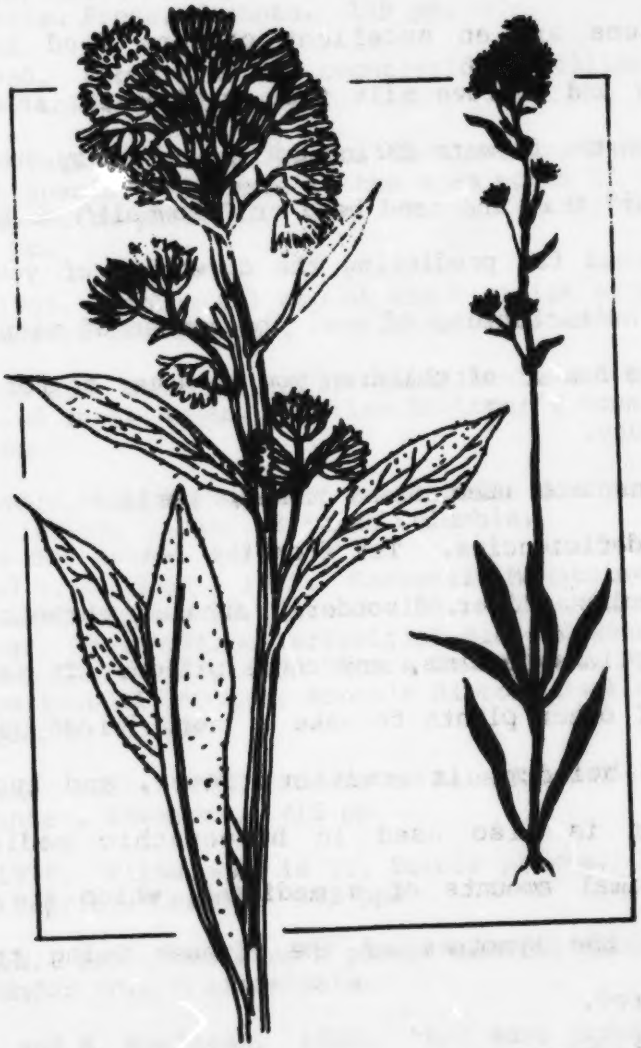
Certain species are said to have wound-healing properties.

S. multiradiata Northern Goldenrod, Rocky Mountain Goldenrod

Taraxacum Dandelion

(Gk. tarassein: to disturb or alter, alluding to supposed effects on the blood in medicine. Dandelion comes from Fr. dent de Lion: the tooth of the lion, because the jagged leaf looks like a row of teeth in a giant lion's jaw. The rays also have five teeth at the edge of each floret. The long sturdy root when peeled, is as white as a lion's tooth).

All parts of the Dandelion are used for food. The greens contain Vitamins A, B, C, and E as well as iron, calcium, phosphorous, potassium, and copper. They are used as salad or potherb before the plant flowers. Mature leaves may be cooked, but the water must be changed to dispel the bitterness. The plant is especially tasty if blanched, or sheltered from the light when growing, like celery. For this reason the crown, or underground leaf stems above the root, is especially delicious, raw or cooked. The roots may be peeled, boiled in two waters, and served like parsnips. The roots may also be dried or roasted, ground, and used as



Solidago multiradiata

Northern Golden Rod

coffee. To brew, use a quantity slightly less than that of regular coffee. The blossoms are also eaten in various ways: dropped on top of pancake batter, dipped and fried as fritters, pickled, or made into wine. The leaves may be used for tea.

Dandelions are an excellent pasture food in that they increase and improve milk flow in domestic animals. Bears forage on the flowers during spring and early summer.

It is said that the seed head or "blowball" of the dandelion may be used for predicting the direction of your lover, or whether he's thinking of you, the number of marriages you'll have, the number of children you'll have, or for telling the time of day.

Dandelions are used as a tonic, purifier, and cure for Vitamin deficiencies. Tea from the leaves has been used to combat colds, liver disorders, anemia, chronic hepatitis, skin eruptions, excema, and constipation. It is mixed with juices of other plants to make a "herb juice" used in cases of fluid buildup, intermittent fever, and hypochondria. Taraxacum is also used in homeopathic medicine, when infinitesimal amounts of a medicine, which are capable of producing the symptoms of the disease being treated, are administered.

T. alaskanum

T. dumetorum

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